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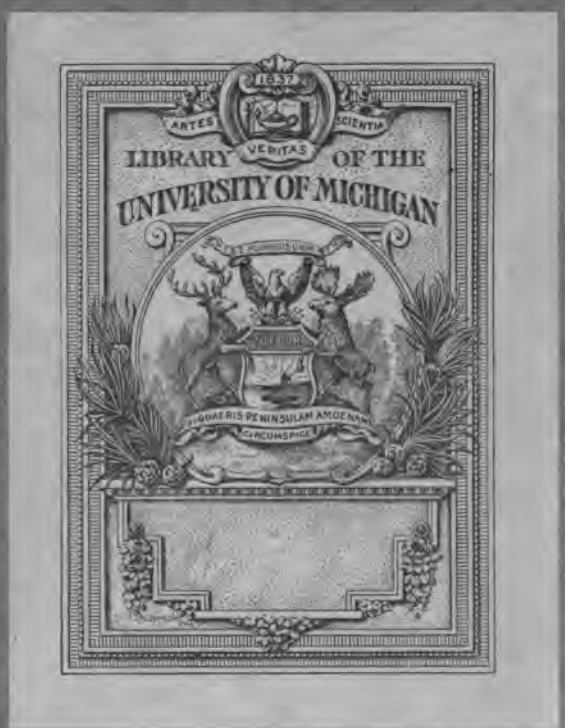
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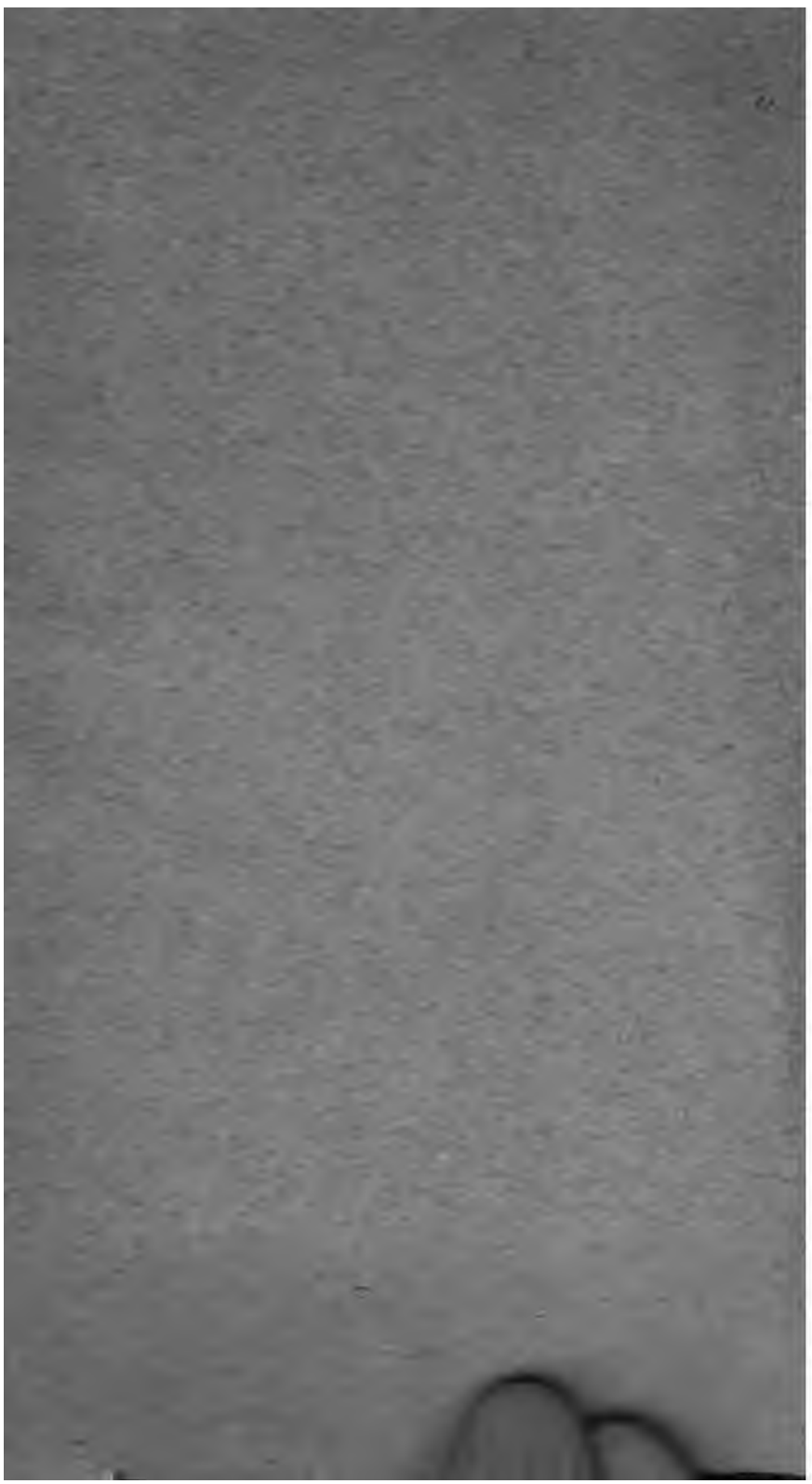

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INDEX.

Anæsthetics, 33, 34, 228, 287, 332, 371, 428, 476, 525
Anthelmintics, ...33, 218
Amauro is, following Parturition, 37
Army, Health of,..... 44
Air in the Veins,.....65, 120
Albuminuria, ...185, 467
Auscultation—Edwards, ... 193
Atropia.....225, 427
American Medical Association, 329
Arsenic in Pemphigus,..... 332
Asthma,..... 333
Anatomy and Surgery, Progress of—Fergusson,..... 352
Aggregate Labor of Mankind,... 426
Aloes in Treatment of Wounds, 456

BOOK NOTICES,
Military Medicine—Woodward, 45
On the Teeth—Robertson,..... 47
Mental Hygiene—Ray 48
Hospital Gangrene—Goldsmith, 92
Materia Medica, Synopsis of Lectures on—Carson,..... 95
Proceedings of American Pharmaceutical Association, 186
Physiology—Dalton,..... 187
Medical Formulary—Ellis,..... 188
American Medical Association, Transactions of..... 234
Medical Diagnosis—D Costa, 281
A Treatise on Pharmacy—Parrish, ... 283
Obstetrics—Hodge,..... 375
Venereal Diseases—Bumstead, 379
Dose and Symptom Book—Wythe,..... 380
Diseases of Women—Scanzoni, 380
Military Medical and Surgical Essays, ... 565
Surgical Diagnosis—McLeod,... 566
Medical Dictionary—Thomas, 568
Army Surgeon's Manual,..... 569
Slade on Diphtheria,..... 569

Bone, Growth of,..... 331
Bromide of Potassium,..... 364
Births, Proportion to Population, 475

Correspondence—Dr. Cicatrix,.... 62
" Editorial,.. 136
" 267, 268, 269
Consumption Curers of N. Y.,.... 164
Case for Argument,..... 206
Creosote and Arsenic in Skin Diseases..... 276
Cerebro-Spinal Meningitis—Allen, 241
" " " McVey, 310
" " " Eaton, 312
Code of Medical Ethics,..... 315
Congestion, Observations on—J. A. A.,..... 337
Caustics,..... 448
Calabar Bean, ... 468
Communicated—Jones, ... 534

Dislocation of Humerus, ... 37
" " Hip Joint, ... 409
Drowning, Its Treatment,..... 63
Dysentery,..... 168
Diphtheria—Millard, ... 201
" Metcalfe,.....272 412
Disease, Observations on—J.A.A. 383
" Treatment of by Controlling Circulation,..... 401
Diphtheria, Spurious.... 470
Duties and Responsibilities of the Physician—Hoag, ... 539

Eye, Clinical Lectures on—Holmes, 20, 55, 114, 152, 195, 258, 290, 344, 393, 443, 509, 545
Empyema, Treatment of,—Slayter, 149
Eczema,..... 174
"Excito Secretory," 266
Ear, Foreign Bodies in, ... 473
Electricity, New Use of,..... 525
Ergot of Wheat, Effects of,..... 558

224328

Fermentation as a cause of Disease, ... 30
Fœtus in Utero, Nervous and Vascular Connection of, ... 141

Gall-Stones, ... 170
Gutta Percha Tree, ... 223
Gonorrhœa, ... 363
Grafting Animals, ... 427

Hospital Gangrene,—Cleveland, 1
Hemorrhage, post-partum—Brooks, 49
Hippocrates, Tomb of 475
Homœopathic Association of Ill., 278

Iodine, Uses of, ... 29
Indigenous Drugs, ... 183
Intestine, Perforation of, ... 199
Inflammation of Fauces, ... 207
Iodide of Lime, ... 334
Introductory address—Miller, ... 479

Ligature of the Sub-Clavian, ... 89
" of the Common Iliac —Brainard, ... 97
" Femoral Artery, ... 476
La Pommerais Case, ... 462
Lungs, Weight of, ..., ... 472
Labor, Complicated Case of, ... 514

Morton Fund Association, ... 42
Malaria—Munson, ... 102
Medical Societies, Proceedings of,
Montgomery County, Ind., ... 157
Aurora, Ills., ... 158
Illinois State, ...180, 230
Galen Medical, Stark Co., Ind, 522
Medical Matters in Vicksburg, .. 181
McMunn's Elixir, ... 229
Medical Graduates of 1864, ... 280
Mortality in Chicago, ... 286
Metropolypus—Trimble, ... 303
McPherson Hospital, Vicksburg, 372
Medical Journals, Suspension of, 520

Neuralgia over Vertebral Spine, 524

OBITUARY NOTICES,
C. H. Cleveland, M. D., ... 96
John C. Dalton, M. D., ... 96
R. L. Smith, Student, ... 42
Shubal York, M. D., ... 189
O. L. Leonard, M. D 190
Franklin Bache, M. D., ... 191
L P. Cheney, M. D , ... 284
John Rodman Cox, M. D., ... 284
Robert P. Thomas, M. D., ... 286
Professor Ribes, ... 286
James Miller, M. D., ... 476
Jonathan Knight, M. D. 522
Orthopedic Surgery—Prince, ... 431, 495, 527
Opisthotonos Cured by Ice, ... 557

Pharmacopœia, Squibb's Report, 25
Pneumonia, ... 39
Physicians in Chicago, ... 43
Physiology and Pathology—Bennett, ... 160
Pulmonary Congestion in Children, 184
Pessaries—Eaton, ... 391
Pancreatic Juice, ... 426
Puerperal Convulsions 459

Resolutions of Medical Class, ... 42
Rush Medical College, ...89, 519
Rambles in Military Hospital—Lackey, ... 145, 300
Rheumatic Fever—Wade, ...175, 208

Scarlet Fever 43
Sanitary Commission, ...82, 421
Surgeon-General U. S. A., ...85, 419
Scrotum, Tumor of,—Baxter, ... 309
Senna, ... 333
Surgeon of the Alabama, ... 369
Strychnia, Antidotes for, ... 474
Syphilis, Constitutional, ... 549

To our Patrons, ... 38
Trousseau, Resignation of, ... 43
Trichiniasis, ... 213
Tape Worm, Male Fern in Treatment of. 218
" " Pepo in Treatment of —Ingals, ... 263
Tobacco, Physiological Effects of, 556
Tetanus, ... 559

Uterus. Inversion of,—Eaton. ... 60
Urethra, Stricture of,—Slayter, 99
Ulcers About the Nails, ... 173
" Chronic, ... 286
" 343, 400, 564
Uterus, Foreign Body in,—Meachem, ... 350
" Prolapsus of,—Slayter, ... 389
Uterine Pain, Hypodermic Treatment of, ... 462
Uterine Hydatids, ... 562

Vaccination, ...41, 44
Varicose Veins, ...22, 267, 425

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ORIGINAL COMMUNICATIONS.

The following report was prepared by Surgeon Cleaveland at the request of Dr. Brinton, as a continuation to the "Surgical History of the War." As it may be of great service, the author has, at our request, furnished us with a copy for present publication.—[*Eds. Journal.*]

HOSPITAL GANGRENE IN THE U. S. MILITARY HOSPITAL, MEMPHIS, TENN.,

By C. H. CLEAVELAND, A. A. S., U. S. A.

General History.—Although I have been at no inconsiderable pains to obtain a history of Hospital Gangrene, as it has appeared in the Military Hospitals of this city, I am convinced that I have been unable to collect all the facts needed for a complete history, and therefore shall confine myself mainly to such as fell under my own personal observation.

The first cases of this disease which fell under my notice were those of Lieuts. Alban, Deelomyer, Letuir, and Davis, who were brought from Vicksburg to Officers' Hospital, of which I then had charge. They were received from the Hospital boat on the evening of the 27th of May, and each had

gangrene of several days' standing when admitted, and were expected to survive but a very few hours. In fact Lieut. Letuer, who had gangrene of the stump of the left leg, died on the 29th, the second day after admission, and Lieut. W. H. Alban on the 1st of June, the fourth day after admission.

Although the flaps sloughed away from the stump of Lieut. Deelomyer so as to leave the bone uncovered for at least two inches, still the periosteum remained vitalized, the gangrene was quickly arrested by the application of Labarraque's Chlorinated Sodæ Solution, under the vigilant care of Cadet Randall, who attended to the dressing of this patient. Granulations sprang up all over the surface of the bone, a fine conical stump was formed, and on the 12th of June, about a fortnight after admission, he was dismissed on leave of absence and went to his home.

About this time, and later, quite a number of cases occurred in the different hospitals, but their nature was not always understood by attendant surgeons. When attention was specially called to this disease by Surgeon Irwin, Superintendent of Military Hospitals, cases were found in the Union Hospital to the number of twelve—June 25th—and soon thereafter at the Jackson, Gayoso and Overton Hospitals. The Surgeon in charge of Adams Hospital reports the case of a man who came from the vicinity of Vicksburg on the 18th of February. He says that is the only case which has occurred in that Hospital this year, a statement evidently erroneous, as Corporal Fuller was sent here from there with gangrene of right ankle on the 9th of August. A similar error occurred in the report of the Surgeon in charge of the Webster Hospital, who says but one case has occurred in his Hospital, and yet he has sent to us Privates Alt, McEvoy, Cloud, McClure, Butler and Overt, all with unmistakable gangrene. From the Overton Hospital we have received fifteen (15) patients, and how many more have had the disease in that Hospital I am unable to determine, as I get no response to my applications for information. From the Jackson Hospital we have received eleven

(11) patients, but from that Hospital, also, have been unable to obtain any farther information.

Up to the 1st of September forty-six (46) patients have been sent to us from other Military Hospitals, having gangrene, which I have reasons for supposing were not more than half the cases that have occurred in the Hospitals. I know of seven (7) cases occurring at the Officers' Hospital which were retained there for treatment as we had no special accommodations for officers.

Not only have there been manifest errors in the reports from different Hospitals in regard to the number of patients who have had gangrene, but the date of its appearance has been incorrectly reported. Early in the month of June the wards of Union Hospital were filled with patients from down the river, and immediately Cadet Randall reported to me that gangrene was among them. Surgeon Irwin states that according to information in his possession, gangrene appeared *first* in the Union, then in the Jackson, the Gayoso, and Overton Hospitals, and his order for organizing and opening Church Hospital was issued on the 19th of June, one week before the disease was *reported* to have appeared in Union Hospital.

Although the order for opening and establishing this Hospital was issued on the 19th of June, yet owing to delay in the Quartermaster's department no patient was received until the 30th of July, and the two days of July are included in the report for the month of August. During its organization, and until the 7th of August, I was in charge of this Hospital, when Surgeon George R. Weeks was assigned to its temporary charge for the special purpose of testing the use of Bromine in the treatment of gangrene.

Until Surgeon Weeks came, we had no Bromine. One ounce had been furnished to the Hospital, but after the dressers had used it once it unaccountably disappeared. During that time reliance was placed mainly in the local use of Labarraque's Solution of Chlorinated Soda applied in its full strength, although the use of Nitric Acid, Acetic Acid, Sul-

phate of Zinc, and Muriated Tincture of Iron was resorted to in some cases.

The favorable result which followed the use of this preparation in the case of Lieut. Deelomyer, at Officers' Hospital, gave me considerable confidence in it, both in gangrene and in erysipelas, which confidence is shown by the Hospital records not to have been misplaced, as every case of erysipelas sent to us was cured by it alone, in from three to five days. Private Samuel Arbothnot was sent here from Jackson Hospital with gangrene in the palm of the left hand, July 30th, and was returned cured of the gangrene, August 8th. Robert Graham was admitted from the Union Hospital on the 31st of July with gangrene of the right arm, and returned with no vestige of gangrene remaining, on the 4th of August. Private William Goff, admitted from Union Hospital, Aug. 1st, with gangrene of right leg, was returned cured, Aug. 4th. Private D. L. Twiman was sent here from the Overton on the 31st of July, with gangrene of the right thigh, and returned cured of gangrene on the 5th of August. Private Fred Louis came from the Jackson Hospital with gangrene of the right hand on the 30th of July, and was returned cured, on the 4th of August. Other similar cures have followed the persistent use of the Chlorinated Soda Solution since that date.

On the 8th of August, when Surgeon Weeks took charge of the treatment he brought with him, from Surgeon Irwin, five (5) ounces of pure Bromine, which supply was exhausted on the 16th of August, and no more has been had since. On the 25th of August, Dr. Warriner, agent of the U. S. Sanitary Commission, gave to the Hospital five bottles of Prof. J.Lawrence Smith's Compound Solution of Bromine, which is now used in place of the pure article, but not to the satisfaction of any one connected with the Hospital, as it evidently is by no means equal in efficiency to the Bromine in full strength.

During the week that pure Bromine was applied it was found, as the Hospital records show, that usually, one single application sufficed to completely eradicate the gangrene. In

cases of apparent failure, it was afterwards found that there were some parts deep, between muscles, under the integuments, or in sulci or sinuses, which the Bromine did not reach. While we had no Bromine, and also, when we had only the Compound Solution, we found it much more difficult, and in some cases quite impossible, to eradicate the disease, mainly from the impossiblity of getting the remedies directly in contact with the entire surface affected.

Up to the 1st of September, forty-six (46) cases of genuine hospital gangrene have been treated in this Hospital. Of that number thirteen (13) died, but none directly from the gangrene. During the month fifteen (15) have been cured, and returned to the Hospitals from which they came, and eighteen (18) still remain under treatment, most of whom are entirely free from gangrone, but are not sufficiently restored in health to leave the Hospital. Some of these will die from the effects of gangrene on the system.

Diagnosis.—Hospital Gangrene as it has been presented to us at this Hospital, has assumed a great variety of appearances. In the earlier stages it has appeared as a dusky, almost black, mass of dead and rotten flesh, occupying the seat of the disease, surrounded by a reddish ring of slightly swollen integuments, which ring varies from one to five lines in breadth, while the adjunct tissues do not appear to be affected by the disease, except that they, as well as the whole body, contain less heat than is natural in healthy structures. Often the disease has burrowed under the integuments bordering a wound, and when the skin dies it loses its epidermis, the true skin becomes reddish, greenish, purplish, or black. When a surface already divested of its skin is affected with the disease (and most of the cases at this Hospital are truly traumatic), the first invasion appears by giving to the surface an ashy gray color, with a pultaceous consistency, and the *peculiar* odor of spoiled meat, by which the disease is readily recognized. This pultaceous, ashy appearance of the surface of wounds presents itself when the areolar tissue is attacked.

When the muscular tissue becomes affected, and when small blood vessels have become ruptured, a dark, grumous, almost black, dirty appearance of the diseased surface is presented, accompanied by a powerful fœtid odor, and usually with an invasion of the disease under the skin, and between the muscles and tendons in the connective tissue, much beyond the boundary of the disease as it appears on a superficial examination. In the case of Private Milseps, who was wounded at Port Hudson on the 27th of May, with a minie ball in the right thigh, and the ball was allowed to remain in until he came here, the disease burrowed in the fascia of the thigh, until his whole thigh appeared gangrenous in the deep-seated parts, and he died suddenly from arrest of circulation. Post mortem examination revealed a detached thrombus in the left auricle of the heart, plugging up the artery, which weighed four hundred and eighty-two (482) grains. One patient, Private T. D. Beggs, who was wounded high up in the right calf by a musket ball, at Helena, on the 4th of July, and brought here on the 31st, had the disease following down the tendon to the os calcis, which was necrosed. Although the entire extent of the leg was laid open, it was too late to save the patient who has since died (Sept. 2d) from the absorption of gangrenous matter. I removed from his thoracic duct a thrombus near six inches in length. These two cases are but extreme illustrations of the tendency of the disease to extend itself in the areolar tissue along plains, and between more solid organs and structures.

But muscles, vessels, nerves, tendons, periosteum and bone are often invaded, when the part affected turns dark, emits a peculiar (gangrenous) odor, dies, softens, and finally liquifies when not removed in the form of slough, or by the dressers's instruments.

Preparation of Wound.—I am fully satisfied that many surgeons have failed in the treatment of Hospital Gangrene, because they have not fully perceived the necessity of thoroughly cleansing the wound of all dead and diseased matter

previous to the use of all local applications. Private James McEvoy, who was wounded at Raymond, Miss., on the 12th of May, and had his right arm amputated at about its middle, had gangrene of the stump about the 20th of June, and was sent here the 10th of August, with a statement that Bromine had been carefully applied daily for eight days. On examination it was found that there were at least twe inches in extent of dead structure on the end of tho stump, and the Bromine had been applied to that and not to the live tissue. All the dead and dying structures were carefully dissected from the surface of the stump, removing a large quantity of putrescent matter, and then Bromine in full strength was cautiously applied to the entire surface, and the disease was at once arrested. He remained ten days, and then was returned to Webster Hospital.

When patients are first brought here it is often necessary to place them under the influence of chloroform, while their wounds are being prepared and to obtund the pain caused by the remedies applied, and afterwards chloroform is not refused them if the dressing is likely to be very painful. The wound is washed by means of a stream of warm water projected from a syringe; all the pultaceous and grumous matter removed with soft cloths; the more tenacious diseased portions taken away with the forceps, the scissors, and scalpel; and finally all blood, water, moisture, and semi-fluid matters under the skin, or between muscles or tendons, are removed by a little swab, made by winding a short strip of soft cloth around a little stick. If the disease has burrowed under the skin it is better to at once open up all such retreats as well as to carefully pare off the diseased portions of the skin on the edges of the wound, that the agent applied may come directly in contact with the vitalized structures in the parts affected. If this thorough preparation of the wound is not attended to, through carelessness or oversight, the progress of gangrene is not likely to be stayed, whatever may be the remedy applied.

Soap-suds as a wash does not answer for gangrenous ulcers

as well as pure warm water, for it appears to combine with the fluids of the surface producing a slimy mixture which it is difficult to remove. A diluted solution of Labarraque's Chlorinated Soda has been found to answer admirably in these cases, for when applied in a gentle stream from a syringe, it can be made to penetrate into all the recesses of the disease, destroying all odor, and dissolving and removing some of the dead matter attached to the surface of the ulcer. At about the strength of sea water it seems to properly stimulate the structures as well as to cleanse them. An ordinary hard-rubber syringe with the little swabs already described, have proved preferable to sponges or cloths for cleansing tender and delicate surfaces.

Local Applications.—Any substance which has the chemical power of decomposing the specific virus of gangrene, so that it no longer exists as gangrene, must possess the property of a curative agent in this disease, provided it can be brought in sufficient quantities in direct contact with each atom of gangrene matter, and, provided also, that it does not possess sufficient power to overcome and destroy the vitality of such still vitalized structures and tissues as we wish to preserve. We have made trials of Nitric Acid, until we have become satisfied of three things in regard to it. It will destroy all gangrenous matter with which it is brought in contact, in its full strength. It is extremely difficult to apply it in its full strength to all parts of the disease in many cases, as in sinuses and sulci, when the moisture already in those parts may so dilute it as to render it inefficient. It is unsafe, for, if brought in contact with the live tissues, nerves, vessels, periosteum, or bone, it is almost certain to cause destruction to the parts and produce irreparable injury. Sulphate of Zinc in solution does not appear powerful enough to arrest the disease in many instances. Acetic Acid has not been applied in a sufficient number of cases to have led to any positive conclusion. The same may be said of the solution of the Chloride of Zinc. The Muriated Tincture as well as the solution of the Per-Sulphate

of Iron have both been used, but mainly on bleeding surfaces and to check hæmorrhage from ruptured vessels, and while they may have a curative power, such property has not been so manifest as to give us much confidence in them as arrestors of gangréne.

Labarraque's Chlorinated Soda Solution has proved quite efficient, applied in its full strength, as an arrestor of gangrene. In all cases where the liquid could be thoroughly applied to the whole of the affected parts, one, or at most, three or four applications, appeared to eradicate the disease. But it could not always be applied to deep-seated parts, or within sulci, without its becoming diluted with the fluids already there,and such a quantity of the solution seemed to be demanded that it was liable to flow beyond the ulcer, and the healthy skin be blistered by it. But during nearly one-half the time this Hospital has been opened, we have placed our main reliance on this agent, and our confidence in it has not been shaken. In all cases of ulceration where no gangrene remains, we wash the surface once or twice a day with this solution diluted and saturate the dressings with it as often as they get dry, or once in two hours, and are well pleased with the result.

Bromine in its full strength, however, is the agent that has given us the most satisfaction. This does not appear caustic enough to destroy healthy tissues, but is of sufficient strength to unite with, and change all the parts affected with the disease. Of course a few drops will not unite with, and change a large amount of gangrenous material, but in all cases under my observation, when the dead matter had been properly dissected away, and the wound cleansed of its pultaceous and other dead matter with the syringe, the forceps, and the swab, and the surface properly dried with soft cloths, one application, or at most but two or three, have sufficed to eradicate all traces of gangrene, and leave the wound a simple ulcer. As has been observed, the wound should be properly and carefully prepared before the Bromine is applied, even if all the other necessary conditions are complied with, should there be

moisture allowed to remain in the deeper portions of the sore, that moisture may so dilute the Bromine as to render it inefficient, or it may protect the subjacent parts from the remedy, and a point of gangrene will remain to infect the whole sore.

Bromine can be conveniently applied by means of little swabs, like those used in cleansing the wound. First, there should be prepared and at hand, a cloth spread with simple cerate, large enough to more than cover the affected surface; the ulcer should be cleansed and dried, and then, an attendant standing near the patient, holds the phial of Bromine from which he removes the stopper just long enough to allow the surgeon to insert into it a little swab, saturating it with the Bromine, which is at once applied to the ulcer. This operation is to be repeated until all parts of the sore are touched with plenty of Bromine, and to parts beyond the reach of the swab Bromine should be injected by means of a glass p.p. syringe, when the sore should be immediately covered with the cerated cloth, to prevent further evaporation of the Bromine, and to protect the ulcer from the atmosphere. Then the part may be dressed with cloths and bandages the same as for simple sores.

The pain which attends and follows the application of Bromine is quite severe, but not more severe nor of longer continuance than follows the application of milder agents. The sense of pain appears even somewhat obtunded by the action of the agent, and after a short time patients express themselves as being much easier than they have been for days.

To surgeons and attendants, Bromine, when incautiously used, proves very disagreeable, and that fact, doubtless, has prevented its use in many cases. If the vapor of Bromine is allowed to come in contact with the eyes and air-passages, such parts suffer severely from the irritation for several minutes, but soon all unpleasant effects pass away. But with proper precaution those parts need not be exposed to Bromine vapor, and ten or twenty patients may have Bromine applied to them in a morning without much discomfort to the surgeon.

Whatever agent is applied to a gangrenous surface, it does not appear desirable to disturb the dressing more than once a day. When Bromine is used it is usually necessary to wait two or three days for the surface of the sore to become thoroughly cleansed before it is again resorted to, but if there remains a decidedly gangrenous odor on the second day, or if it appears at any future time, the parts should be carefully examined and Bromine applied to all affected surfaces. Gangrene can be detected by the trained sense of smell more readily than in any other way, and for several days after the disease has disappeared wounds should be examined in this manner as well as by the eye, and all appearances of taint followed to their sources, and the disease eradicated.

On the second day, usually, after Bromine has been applied the surface of the ulcer looks dark and almost charred; on the third day the dead portions begin to liquify, and the fourth day the surface appears studded with healthy granulations.

After the gangrene is subdued, the wounds are dressed as simple ulcers, but in most cases the dilute Chlorinated Soda Solution is constantly applied, both as a slight stimulant to the newly-formed tissues, and to protect the wound from the virus which may be in the atmosphere of the Hospital.

I have made considerable use of Oakum, wet with a solution of Chlorinated Soda, or of the Chloride of Lime, to gangrenous ulcers *the day after* applying Bromine, and to the simple ulcer after the wound becomes free from gangrene, and am satisfied that in general it should be preferred to lint. It is easy of application, readily absorbs the excretions, and is easily removed when the wound again requires dressing. A very convenient way for the nurses to apply moisture to the sore, I have found to be by means of an ordinary hard-rubber syringe. The solution may be drawn into the syringe, the pipe of which can readily be inserted under the bandage, and the liquor applied directly to the Oakum, filling and covering the ulcer and moistening the entire dressing.

The Compound Solution of Bromine has been extensively

used by us, and especially since our stock of pure Bromine became exhausted, but we do not consider it a good substitute for pure Bromine. It does not appear to be active enough to readily destroy the gangrene. It has been applied carefully, thoroughly and faithfully, day after day, by the swab and the syringe, into parts where the gangrene has burrowed under fascia, and along the tendons, as it is extremely apt to do, and directly to the walls of such extensions, when they have been laid open, by means of pledgets of lint, saturated with it, as well as in the same manner to the original ulcer, and yet we have sometimes failed for days to arrest the disease. I have made careful trial of both the Compound Solution of Bromine and Labarraque's solution of Chlorinated Soda, and can not percieve that the Bromine preparation possesses any valuable properties which the Chlorinated Soda has not. Both destroy the disease when applied to it, but the Compound Solution of Bromine causes the most pain, does not appear to be any more active than the Chlorinated Soda solution in full strength, and very readily loses its Bromine by vaporization, if not quickly and cautiously covered with a cerated cloth.

Pure, unadulterated Bromine seems endowed with special qualities which entitle it to more confidence than we can bestow upon any other agent with which we are acquainted. The vapor, when brought in contact with the odoriferous emanations of gangrene, at once destroy their odor, and probably their specific gangrenous character. When thoroughly applied in sufficient quantity to a gangrenous sore, it at once obliterates all gangrenous odor, and no gangrene appears afterwards, unless the wound receives a new infection from gangrenous matter, allowed to come in contact with it. Its steady vaporization permits it to be applied to the bottom of sinuses and sulci, which cannot be safely laid open with the knife,and which are very common with the patients of this Hospital, and its prompt, almost instantaneous action precludes the necessity of a prolonged use of the remedy, while sufficient experience in its use shows that it may be applied directly to the

covering of a nerve, or the periosteum, without destroying their vital integrity.

Contagiousness.—Hospital Gangrene is produced by infection upon an exposed surface. Several cases have come to us with the disease following the application of a blister, as well as in bed-sores. One, where the arm was broken, badly-adjusted splints produced abrasion, and gangrene followed. One man acting as nurse to his Captain, who had gangrene, had a little spot of inflammation on his ankle, caused, possibly, by musquito bites, which he had rubbed the skin from, he also had little scratches on his fingers. Gangrene set in at all these points, and he may yet lose his life as the result. In one case at Officers' Hospital, an officer with gangrene occupied a room alone. The carpenters wished to put a water pipe in it, and he was removed into a room where there were three other officers with wounds not then gangrenous. All four had their wounds exposed and dressed, and the gangrenous odor pervaded the apartment. Although the officer was returned in an hour, the next day gangrene appeared in the wounds of all three who had been exposed to the infection. Instances have often occurred in this Hospital where wounds that have been free from gangrene for several days, became again diseased, doubtless from renewed infection, received from others laboring under the disease.

To guard against infection we have made free use of Chlorinated Soda, Chloride of Lime, a solution of the Per-manganate of Potassa, Chlorinum, and Bromine, as well as scrupulous cleanliness and free ventilation. Each patient is supplied with his own drinking cup, and other utensils, and his own sponges; if he has two wounds, and only one is gangrenous, each wound has its sponge, and they are kept as clean as pos sible. If the nurses, dressers, or surgeons, have wounds or abrasions about their hands, Bromine is applied, and then the hands exposed to the virus without fear. In cleansing a very bad gangrenous sore, the scissors were found to be dull, and while sharpening them I cut out the ball of my left forefinger.

I applied Bromine and the wound healed kindly and readily. Nearly every day I have had cuts, pricks, scratches, or other abrasions on my hands, which are fully exposed in dressing the wounds, and in the dead house, and with no unpleasant consequences, I have always applied Bromine to the denuded surfaces before exposure, and am thoroughly convinced that the virus of the dead house, as well as other animal poisons, is entirely destroyed by the action of Bromine.

General Treatment.—The constitution seems to require much more than the usual amount of nutriment in this disease, and it is only after considerable poison has been absorbed, and the heart and lungs have become affected, that digestion and assimilation are deranged. It is true that the *temperature* of the entire body is almost invariably below the normal standard. During the month of August the thermometer ranged in the wards of this Hospital, at 2 o'clock, P. M., at from 98° to 103°, and yet the average temperature of the patients at the same hour, as indicated by the thermometer in their axillar, was but 89°. The average daily temperature of Sergeant Wilkie, who died from pyæmia, after secondary hæmorrhage, was only 74° and that of Private T. D. Riggs, who had gangrene of the right calf, extending down the tendon to the heel bone, was 84°. The pulse of the former averaged 114 beats, and that of the latter 88 beats in a minute This low state of temperature led us to a very free use of alcohol, in the form of ale, porter, whisky, and brandy, usually given once in two hours, and as much nutriment, beef, eggs, etc., as the patient would take. A very marked desire for acids prevailed, which was gratified by giving pickles, cucumbers, citric acid drinks, and acid fruits. After the disease had progressed to the serious invasion of the general system, (and most of our patients were *old* cases brought from other hospitals to die,) a very persistent diarrhœa was common, and that was about the only condition that demanded active medication. We carefully avoided the use of cathartics and opium, and as a soother to nervous and febrile excitement, in place of the opiates, used Hoffman's

Anodyne. In some cases distinctly complicated with miasm, (and most of the patients came from the vicinity of Vicksburg where they had been exposed for months,) we gave the Sulphate of Quinia. One or two doses of ten grains each was, usually sufficient.

Conditions Favoring the Appearance of Gangrene.—While no certain *cause*, except contagion, for the disease has been determined, it is evident that a depression of the general vital forces have been favorable to its accession. Fourteen (14) out of forty-six (46) of our patients were secession prisoners, and I think that all of the seven at Officers' Hospital, were also prisoners, a much larger number than a fair proportion, proving that exposure, privation, and consequent depression of the vital forces, is a condition favoring the appearance of the disease.

Post Mortem Appearances.—The tables compiled from the Hospital Records, and the reports of individual cases, furnished by Cadets Gunn and Lloyd, together with the learned and able report on the Pathology of the disease, by Surgeon Weeks, who has had unusual opportunities for the study of gangrene at Louisville, Vicksburg, and at this place, preclude the necessity of any extended remarks on this branch of the subject. We have made examinations in every case, with one or two exceptions, of those who have died here, and have observed a very uniform set of conditions. In all we have found thrombi in the heart, some of which have been very large. In one we found a thrombus in the thoracic duct, and I regret that we did not examine that passage in the preceding cases. In one case of long standing, the heart thrombus was softening and the walls of the heart were tainted with gangrene. In another case, where the disease was of still longer duration, the heart thrombus was considerably broken down and liquified, and the walls of the heart very much softened, flabby and decidedly gangrenous.

The lungs in each case were spotted with dark specks, and on being cut into, it was observed that the smaller arteries

were often completely filled with small thrombi and dark mater, evidently the debris which had been washed away from a thrombus in the heart, and become lodged in the smaller vessels. The disease was said to have been unusually malignant and rapid here. In no cases have I perceived any collections of pus, or softening of matter, said to have been observed in the lungs of those who have died of gangrene elsewhere.

Curability of Gangrene.—This disease, like Syphilis, in its earlier stages seems to be entirely local, and completely curable, when the parts affected are not vital organs, which has never been primarily in any case that has come under my observation, and when all the parts affected can be reached by direct application of the remedy. But the *secondary* affections, as the thrombi in the heart, the pulmonary complications, and the change in the fluids, which are sometimes called *Pyæmia*, are conditions which do not seem controllable by remedies. We have often had cases recover after the heart, the lungs and the blood had become seriously implicated. But gangrene can be considered certainly curable only in cases where the system has not become seriously affected by disease. In all simple cases gangrene seems as curable as a burn, scald or any other sinus wound.

General Treatment.—No remedy has yet been presented to us, that has apparently any marked or positive curative power over the constitutional and organic derangements produced by the absorption of the poison of gangrene. We saturate the air of the wards of the Hospital with Chlorine, and we have given Bromine internally for days and weeks, and while we do not know for a certainty that this course has proved beneficial to our patients, yet we should hesitate to deprive them of even the possible benefits arising therefrom. Pure air, full nutrition, alcoholic preparations, repeated as often as once in two hours, hope, cheerfulness, and immediate removal of all causes of pain, distress, uneasiness, and fretfulness, (for gangrenous patients are very childish,) and perfect cleanliness of the person and the bed, seem preferable to any form of perturbative medication.

CASES OF HOSPITAL GANGRENE

TREATED IN CHURCH U. S. A. MILITARY GENERAL HOSPITAL, DUR ING THE MONTH OF AUGUST, 1863.

[For Table, see next two pages.]

REMARKS.

1. Died of Pyæmia. Was moribund when admitted.
2. Transferred to Jackson Hospital, August 17th, 1863
3. " " " " " "
4. Now under treatment, wounds filling up.
5. Was infected when admitted. Sepsis and Thrombi formed on autopsy.
6. Transferred to Jackson Hospital, August 8th, 1863.
7. " " " " 4th, "
8. Lower Condyle of humerous is necrosed.
9. Transferred to Jackson Hospital, August 19th, 1863
10. Died of Pyæmia.
11. Thrombus in aorta. had Sepsis when admitted.
12. Died of Mechanical Pneumonia and Thrombus.
13. Transferred to Overton Hospital, August 24th, 1863
14. Under treatment now. Tendo Achilles involved.
15. Transferred to Overton Hospital, August 19th, 1863.
16. " " " " 21st, "
17. Still under treatment, had facial Erysipelas, August 8th, 1863.
18. Died of Diarrhœa. Wound was granulating since August 11th, 1863.
19. Transferred to Overton Hospital, August 5th.
20. " " " " 21st. Deep pereneal fascias sloughed or come away.
21. Mechanical Pneumonia and Sepsis when admitted
22. Pyæmia, had infection when admitted. Wound did not granulate.
23. Transferred to Union Hospital, August 4th.
24. " " " " 5th.
25. Still under treatment.
26. Admitted 1st August. Moribund. Died the 2d, of Secondary Hemorrhage.
27. Reappeared Aug. 19, wound was granulating from 13th to 19th of Aug.
28. Died of Pyæmia.
29. Transferred to Gayoso Hospital, August 19th.
30. Reappeared Aug. 19th, had no bromine, used nitric acid—will die.
31. Secondary hemorrhage in the night.
32. Transferred to Adams Hospital, August 17th.
33. " Webster " " 21st.
34. Still under treatment.
35. Bromine not applied to all, was burrowing. Died from Thrombus in left Auricle weighing 482 grains and occluded auriculo ventricular opening.
36. Transferred to Webster Hospital, August 23d.
37. Still under treatment.
38. " "
39. " " His condition is doubtful.
40. " "
41. " "
42. " "
43. " " Same as No. 24, relapsed and returned.
44. " " Ball removed from tibia, was in cancellus structure.
45. " "
46. " " Has Sepsis.

Compiled by Surgeon Geo. R. Weeks, U. S. A.

Cases of Hospital Gangrene treated in Church U. S. A.

No	Name.	Rank	Regiment.	Co.	Where wounded.	When.	Tissues Involved	region of wound.
1	Miller, Jos. T....	priv.	33d Iowa	?	.....	.....		right thigh.
2	Cooms, Reuben..	corp	" "	C	Helena, Ark	July 4	cel & bone	dorsal region.
3	Nelson, John....	priv	6th Mo	D	Cham'n Hill	May 16	mus integ	left heel.
4	Graham, Sandf'rd	"	33d Iowa	C	Helena, Ark	July 4		left arm & side
5	Johnson, Oliver..	"	" "	C	" "	"		right elbow.
6	Arbuthnot, Saml.	"	28th "	F	" "	"		left hand.
7	Louis, Fredrick ..	"	1 Ind Cav	F	.....	.....		right hand.
8	Whitaker, John..	serg.	33d Iowa	E	Helena, Ark	July 4		left elbow joint
9	Pfister, George...	priv.	48th Ohio	C	Vicksburg	May 22		left knee.
10	Hughes, Elijah...	"	4th Va.	I	"	May 19	knee joint	left loin.
11	Beauer, Jas. A...	"	33d Iowa	A	Helena, Ark	July 4		right instep.
12	Frank, John.....	"	6th Mo.	F	Vicksburg	July 15		right shoulder.
13	Oxford, John....	"	3rd Ark.	K	Helena, Ark	July 4		right th gh.
14	Dorton, Lafayette	"	9th Mo.	B	"	"		right calf.
15	Riggs, T. D.....	"	Ha'thorns	I	"	"		left foot.
16	Coulter, B. F....	corp	Bell's Ark	K	"	"		right heel.
17	Bryon, Robert...	priv.	8th "	D	"	"		left thigh.
18	Gray, John.....	"	2d "	C	"	"		left leg.
19	Twitnan, D. L...	"	8th Mo.	I	.....	.....		right thigh.
20	Harris, W. H....	"	33d Iowa	C	Helena, Ark	July 4		right thigh.
21	Butumbaugh, M..	"	99th Ill.	C	Vicksburg	May 22		left thigh.
22	Wilkie, August..	serg.	33rd Mo.	H	Helena, Ark	July 4		right knee.
23	Graham, Robert..	"	" "	E	"	"		right arm.
24	Goff, William....	priv.	33d Iowa	I	"	"		right leg.
25	Alt, Michael.....	"	26th Mo.	F	Cham'nHil	May 16	mus integ and bone.	right leg.
26	Ijames, V. M.....	"	HartsArk	—	" "	.....		left dorsum.
27	Cole, G. A.....	"	7th Mo.	K	Helena, Ark	July 4		left ankle.
28	Alexander, John.	"	33d Iowa	E	....	.....		loin.
29	Holzimu, Wm...	"	12th Mo.	H	Vicksburg	May 22		left thigh.
30	Sullard, J. A....	"	7th Mo.	A	OfficersHos	Aug 1		right ankle.
31	Campbell, John A	corp	81st Ill.	H	Vicksburg	May 22		left hand.
32	Fuller, S. W.....	"	26th Con.	A	PortHuds'n	Jun 14		right ankle.
33	McEvoy, James..	priv.	7th Mo.	D	Raymond	May 12		right arm.
34	Cloud, Allen.....	"	22d Iowa	H	Vicksburg	May 22		left arm.
35	Millceps, C. F...	"	18th Ark.	G	PortHuds'n	May 27		right thigh.
36	McClure, Samuel.	"	83d Ind.	H	Vicksburg	May 19		stump left leg.
37	Butler, John M..	"	5th Iowa.	D	Cham'n Hill	May 16		stump rightleg.
38	Onert, Peter.....	"	124th Ill.	F	" "	May 16		left thigh.
39	Goodrich, I.....	"	5th Mo.	E	Helena, Ark	July 4		gential & dorsil
40	Waters, A. M....	"	Bell's Ark	E	"	"		left thigh.
41	Scott, James....	"	1st Mo.	A	"	"		right thigh.
42	Watts, L. L....	"	1st Ark.	D	"	"		left shoulder.
43	Goff, William....	"	33d Iowa	I	"	"		right leg.
44	Brickerhoff, B...	"	47th Ohio	K	Vicksburg	May 19	tibia	left leg.
45	Grant, F. M.....	"	3rd Iowa	E	"	Jun 22		right calf.
46	Witby, T. T.....	"	29th Iowa	F	Helena, Ark	July 4	bone	stump ri't thigh

Military General Hospital, during the month of Aug. 1863.

When Gangr ne began.	Wh-n admitted	When arrested.	Duration in this Hospital.	Local Treatment.	Gen'al Treatment.	Died.	Convalesced.
.....	July 30	.....	.....	chlo. soda.	Tonics, skin and nut. diet.	Aug 8	... .
July 28	" "	Aug 10	1 day	bromine, Aug. 9		.....	convalesced
" 25	" "	" 12	2 "	" " 10		.....	"
" 10	" "	" 11	1 "	" " 9		.....	"
" 10	" "	" 12	2 "	" " 10		Aug 13	.....
.....	" "	.....	.....	chlo. soda.		.....	convalesced
.....	" "	Aug 3	.....	sul zinci. chlo. soda.		.....	"
Jul 19	" "	" 10	1 day	bromine, Aug. 9		.....	"
" 25	" "	" 10	1 "	" " 10		.....	"
Jun 27	" "	not arres'	.....	nit acid and nit aly.		Aug 2	.....
July 17	" "	Aug 12	3 days	bromine, 9, 10, 11 Aug		" 18	.....
" 20	" "	" 6	.....	nit acid and chlo. soda		" 8	.....
" 20	" 31	" 11	1 day	bromine, Aug. 10		.....	convalesced
" 10	" "	" 13	2 "	" " 11		.....	"
" 12	" "	" 10	1 "	" " 9		.....	"
" 24	" "	" 12	2 "	" " 11		.....	"
" 28	" "	" 13	2 "	" " 10		.....	"
" 22	" "	" 11	1 "	....		Aug 23	.....
.....	" "	.....	.....	bromine, Aug. 9		.....	convalesced
July 20	" "	Aug 10	1 day	" " 9		.....	"
" 27	" "	" 10	1 "	" " 10, 11		Aug 14	....
" 10	" "	" 12	2 "	chlo. soda.		" 17	.....
.....	" "	.....	.....	chlor'te soda & nit acid		.....	convalesced
.....	Aug 1	Aug 5	1 day	bromine, Aug. 10		.....	"
July 22	" "	" 11	.....	per sul. ferri.		.....	"
.....	" "	.....	4 days	bromine, Aug. 9		Aug 2	... .
July 25	" 2	Aug 13	.....	nit. acid and chlo.soda		" 21	.....
.....	" "	....	3 days	bromine, Aug. 9		" 7	.....
July 22	" "	Aug 12	4 "	" " 9, 12		.... .	convalesced
Aug 1	" 5	" 13	4 "	" " 8, 10, 11, 12		.....	.....
May 30	" 8	" 12	1 "	" " 10		Aug 13	.....
July 25	" 9	" 11	1 "	" " 10		.....	convalesced
" 20	" 10	" 11	7 "	com sol bro fro 13 to 20		.....	"
Aug 4	" 13	" 20	... ..	" 14 15		.....	"
" 8	" 14	.....	2 days	" Aug. 16		Aug 27	.....
" 8	" 15	Aug 18	4 "	" " 16		.....	convalesced
July 20	" 15	" 20	1 "	" " 28		.....	"
Aug 1	" 22	" 28	. ....	" " 26		. ..	"
" 20	" 24	wo'nd bet	2 days	" " 25		.....	.....
" 10	" 24	Aug 27	1 "	" " 25		.....	convalesced
" 4	" 24	" 26	1 "	" " 25		.....	"
" 10	" 24	" 26	1 "	" " 27		.....	"
" 15	" 26	" 28	.....	" " 28		.....	.....
" 15	" 26	look bet.	.....	" " 28		.....	.....
" 16	" 28	" "	.....	" " 28		....	.....
" 1	" 29	" "	.....	" " 28		.....	.....

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

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CONJUNCTIVITIS AND ITS TREATMENT.

GENTLEMEN:

The characteristic symptoms of catarrhal conjunctivitis, uninfluenced by constitutional disease, are congestion and swelling of the conjunctiva with increased secretion. These symptoms vary in intensity in different cases. They are usually first observed in the conjunctiva of the lids, and in the semi lunar fold, the sclerotical portion being last affected. The severity of the disease can almost always be measured by the severity of these *three symptoms combined.* Very marked redness or swelling alone is not necessarily a bad symptom. Pain, photophobia, and a sense of heat are not present except in severe or protracted cases. When observed, they indicate complications with the cornea or other important tissues. Instead of pain, there is a feeling of irritation, as if there was fine dust between the lids and globe; this sensation is caused by the enlarged vessels of the palpebral conjunctiva rubbing upon the cornea. The patient generally experiences but little discomfort from light, unless it be artificial or too brilliant. Continued use of the eyes invariably causes uneasiness. The secretions in the commencement of the attack consist principally of tears; the quantity of mucous gradually increases and collects at the internal angle. The presence of this mucous spread upon the cornea causes the obscured vision, of which patients complain. On account of the diffraction of light produced by the thin strata of mucous on the cornea, objects seem

indistinct and the flame of a candle appears surrounded by a globe of light.

The causes of Catarrhal Conjunctivitis are not always readily discovered. Injuries, the action of winds and dust, and especially exposure to changes of temperature are among the most common causes. The eruptive diseases, as small pox, measles, and scarlatina, independent of their direct influence in their earlier stages, sometimes seem to predispose the patient, even after recovery, to inflammation of the conjunctiva, especially when exposed to cold and dampness. A scrofulous diathesis is a strong predisposing cause.

The course which catarrhal conjunctivitis pursues, depends upon the treatment and the manner in which the patient can protect himself from exciting agents. It sometimes passes rapidly into the muco purulent form, causing speedy destruction of the cornea. The course most common among the poorer classes is such as you have seen in quite a large number of patients in the clinic, afflicted with "granulated" lids, vascular cornea, atrophy of the conjunctiva, entropion, ectropion, trichiasis, opacity of the cornea and even total blindness.

The history of these cases, in many respects, is almost invariably the same: A poor laborer, or a poor woman, surrounded with a large family, from the very nature of their occupations subjected to every kind of exposure, and from ignorance or carelessness always violating the laws of health, is attacked with the simple catarrhal inflammation. As "it is nothing but a little cold," the vain hope is cherished that it will pass away in a few days. The patient continues his work and the symptoms increase in severity. The fear of the expense attending medical treatment induces him to seek relief in the indiscriminate use of astringent solutions. Finally, he is forced, by necessity, to apply for medical aid, and remains under his physician's care only till he is able to resume his work, without being completely relieved. The eyes, now much more susceptible to irritating agents, soon relapse into a worse condition, if possible, and in this way the afflicted pa-

tient is forced to labor for the support of himself and family, seeking medical aid only when threatened by blindness. After months, or even years of misery, the poor patient is left in poverty with vision more or less impaired for life. Few diseases, so simple in the beginning, cause, by neglect, so much misery as this class of inflammatory affections of the conjunctiva.

The treatment with patients of good constitution is almost entirely confined to the removal of irritating agents and to the proper local use of astringent caustics and antiphlogistics. Of the active remedies, the caustic astringent in the great majority of cases are of most importance.

In the ordinary mild cases, where there is little redness, swelling or heat, it will usually be sufficient to direct the patient to bathe the eyes frequently in tepid water, and to use two or three times daily a solution of Arg. Nit., gr. ij—iv and Aquæ Distil., ʒj; or of Zinc Sulph., gr. iij—vi and Aquæ Rosæ, ʒj. A couple of drops should be introduced between the lids and globe. Use of the eyes and exposure to winds and dust should be avoided.

If, however, the symptoms are more marked, it is advisable to use cold water, applied *constantly* to the eyes, by means of wet compresses, changed every few minutes. At the same time a solution of Arg. Nit., ten grains to the ounce, should be used once daily in the manner I shall soon describe. In private practice, especially among the poorer classes, there are objections to the use of cold water, since patients neglect to change the compresses sufficiently often. They become warm, and the frequent change from warm to cold compresser counteracts the good effects of the application. Except where patients are intelligent and careful to observe directions, it is, perhaps, more prudent to omit cold applications.

In the severer cases, I recommend the following plan of treatment, which I have used with great success. I direct the patient to avoid every thing that can irritate the eyes; to use nourishing, but simple food in moderate quantities; to take

once in twenty-four or forty-eight hours, according to circumstances, a small dose of Sulphate of Magnesia. I think advantage is gained by the use of three or four drops of Tinct. Verat. Viridis every three hours till the pulse is reduced somewhat below its normal rate. I apply directly to the conjunctiva, in the following manner, a solution of arg. nit. gr. x—xx to the ounce, according to the severity of the case. After turning the lids and drawing them apart to expose as much as possible of the conjunctiva, I press a small piece of dry linen upon the surface to remove the mucous and moisture. By means of a short and soft camel's-hair pencil of considerable size, completely moistened and yet not saturated with the solution, I paint the surface of the conjunctiva till the characteristic white appearance produced by nitrate of silver is produced. It is well to apply the linen once more for the purpose of absorbing the solution which has not united with the tissues. The solution should be applied once daily, being reduced in strength as the symptoms improve. The eyes should be carefully cleansed by frequently but gently washing them with tepid water. I believe strong solutions, simply dropped between the lids, not only often fail to do good, but even produce injury. I think it is of great importance that the solution should be applied uniformly over as much surface as possible.

I seldom use nitrate of silver in a weaker solution than ten grains to the ounce. I prefer to apply this solution in the way just described, even in mild cases. I have never seen any evil results, and think patients make more rapid recoveries. In the same manner I apply stronger solutions of nitrate of silver in cases of muco-purulent conjunctivitis, so often found by thousands, in the different European armies, in our crowded asylums for indigent children, and so prevalent in the Northwest as an epidemic disease; also in gonorrhœal ophthalmia and in the conjunctivitis of new born children. You must remember that these diseases often run a rapid course, destructive to important tissues of the eye. They require active treatment and careful watching.

On account of the great pain and swelling, it is frequently necessary to place the patient under the influence of chloroform. The solution of nitrate of silver, not less than twenty grains to the ounce, should be applied somewhat more freely than in milder cases, by passing the brush several times over the conjunctiva. Immediately after the application of the caustic, the conjunctiva should be extensively, though not too deeply, scarified by means of a sharp knife. The depth of incisions should depend upon the degree of swelling. In these cases ice water compresses are almost absolutely necessary. Day and night it is the imperative duty of the attendants to change the compresses every few minutes. That the patient may not be too much disturbed by pain and discomfort, it is advisable to administer suitable doses of morphia. Veratrum viride, I think, controls to a certain extent the inflammation. The patient should be confined to a room of moderate temperature, and in severe cases should be placed in bed.

The conjunctivitis of new-born children claims your special attention, as it is by no means an uncommon disease, and when neglected often terminates in the loss of sight. Unfortunately, mothers and nurses too frequently regard the affection of of trifling importance and neglect medical treatment, until the symptoms have become alarming. In the earliest stages of the disease, before the discharge and swelling had become marked, the disease can almost invariably be arrested by strict attention to cleanliness, and by the use, three or four times a day, of nitrate of silver, two to four grains to the ounce of water. But where the disease has been suffered to run its course for several days and there is copious discharge of thick pus, with a swollen, granulated conjunctiva, it is necessary to apply the stronger solutions and to scarify the conjunctiva as above described. In very severe cases the constant application of ice water is of great advantage. But this is often attended with certain difficulties arising from restlessness of the little patients. Where it is absolutely necessary to employ ice water, I usually give once in two or three hours five or

ten drops of a solution, composed of an ounce of water and a quarter of a grain of Sulphate of Morphia. The patient is thus kept quiet and is not disturbed by changing the compresses.

I need scarcely remind you how important it is to avoid bringing the smallest quantity of the puruleut discharge from the eye in contact with the healthy conjunctiva. When one eye alone is affected, it is always prudent to protect the other by covering it with dry lint and strips of delicate plaster painted with collodion.

I have given you a brief statement of what I believe to be the most reliable treatment of acute conjunctivitis. I would refer you again to the translation of Græfe's Monograph on the use of caustics, published in Dr. Homberger's *Journal of Ophthalmology*. And I would urge upon you a careful study of the chapters on the Anatomy, Physiology and Pathology of the Conjunctiva in the works of Arlt and Stellwag. In the same works, as also in those of Lawrenee, Walton and Mackenzie, you will find excellent directions regarding the treatment of conjunctivitis.

SELECTED.

THE NEW UNITED STATES PHARMACOPŒIA.

THE CHANGES THAT HAVE BEEN MADE, WITH THE REASONS FOR SO DOING.

Dr. E. R. Squibb, of Brooklyn, N. Y., a member of the Committee for Revision of the U. S. Pharmacopœia, reported at the Academy of Medicine that the work had been published, and made in substance the following statements in relation to the changes that had been made, together with the reasons for so doing.

Weights and Measures.—In the department of weights and measures the following changes have been made. The terms pound, drachm (for other than fluids), and scruple are disused,

and all weights are expressed by the Troy ounce or grain. In writing for fluids the sign letter *f* should precede the ℥ or ʒ sign. The fluid measures are derived from the wine gallon. The term gallon is not used, its equivalent being expressed in pints. The use of the Arabic numerals is recommended as preferable to the Roman.

The Materia Medica list is divided into two sub-classes. I. Primary, and II. Secondary Lists. The first consists of those articles which are either of primary importance as remedies, or enter into the formulæ of the work, while the second class is formed of those which are of secondary importance and do not enter into the formulæ.

Chromic acid (acidum chromicum) is introduced as a valuable and self-limiting escharotic. Thus far it has been employed extensively in uterine diseases. It is applied through a speculum by a glass tube or a glass rod.

Lactic acid (acidum lacticum) is introduced for the purpose of making lactate of lime; and the *glacial phosphoric acid* is also placed in the primary list for the preparation of dilute phosphoric acid, a very valuable nervine tonic.

Fusel-oil (Alcohol Amylicum) is introduced for making valerianic acid.

Aloes is divided into three varieties, I. Aloe Barbadensis, II. Aloe Capensis, and III. Aloe Socotrina, which is the best.

Ammonia alum (sulphate of aluminum and ammonia) is given for a choice as an ordinary astringent.

Aqua Ammoniæ fortior.—The term *aqua* is substituted for *liquor*, inasmuch as the former is intended to apply to a solution of volatile substances and the latter to fixed substances.

Belladonna Radix is added for the preparation of atropia.

Bromine is introduced to furnish the bromide of potassium, the reputed remedy for hospital gangrene.

Chiretta is added to the list of bitter tonics.

Chloroformum Venale.—Commercial chloroform is placed in this list to give an opportunity for prescribing the common article for external application, it being a great deal cheaper, and equally, for that purpose, as good as the pure.

Cinchona Flava.—The cinchonas are divided into C. flava and C. pallida, the flava (yellow) being the best.

Fermentum (yeast) is made officinal, that it may be written for in prescriptions; *gutta percha* is introduced for making the gutta percha collodion.

The Butter of Cocoa (Oleo theobromæ) is introduced as the best ingredient for suppositories.

Opium.—Opium must not be considered officinal unless it contain 7 per cent. of morphia.

Potassæ Permanganas is a most valuable disinfectant for carcinomatous growths, but hardly fit for anything else.

Saccharum lactis (sugar of milk) is introduced as a vehicle for alkaloids where it is necessary to divide very finely. It is very slowly soluble, and is by this means capable of disguising the taste of medicines.

Scammony must contain 75 per cent. of true resin to be officinal.

Sinapis (mustard) is divided into two varieties (white and black), both having different therapeutical properties.

Whisky (spiritus frumenti), and bay rum (spiritus myricæ) are officinal preparations. The former should contain 48 to 56 per cent. of alcohol, be free from odor, and be at least two years old.

Port and Sherry Wines are also officinal, the former is named Vinum Portense, and the latter Vinum Xericum.

Sulphur.—Sublimed sulphur is introduced to be used as an ingredient for ointments in cutaneous affections, inasmuch as it contains the sulphurous and sulphuric acid, which the washed rotund sulphur does not. This latter is used internally.

Alcohol Fortius (stronger alcohol) was introduced as a solvent for iodine and like substances.

Alcohol Dilutum is the stronger alcohol diluted one-half with water.

Aurantii flores is used for making the orange flower water, a useful substitute for the ordinary rose water.

Cadmium is introduced for making the sulphate of that metal.

Caffea (ground coffee) is added on account of its antidotal effect in opium poisoning.

Canna is an addition to the fecula.

Ferri Sulphuretum is introduced for making the sulphureted hydrogen, which is so frequently used as a test.

Leptandra is a remedy for trial. It is an emetico-cathartic, and eclectics contend that it is a substitute for calomel in its action on the lower and upper part of the canal.

Matico is also on trial as an aromatic tonic and stimulant. It possesses no astringent properties.

Nectandra has the properties of being antiperiodic and febrifuge. Its active principle is biberine, and is used in the form of a sulphate; it does not excite the circulation or the nervous system like quinine.

Sodæ Sulphis (sulphite of soda) is introduced as a convenient form of applying sulphurous acid in various cutaneous affections, where the pure acid is too irritating.

Syrupus Fuscus (molasses) is made officinal that it may be written for.

This completes all the new introductions into the primary list.

SECONDARY LIST.

Achillea (yarrow) is an antiperiodic and tonic. On trial.

Angelica is the root of the Angelica Archangelica, and not of the Angelica Atropurpurea.

Berberis (barberry), root of the berberis vulgaris, is a tonic and purgative.

Brayera (kousso) is the celebrated remedy for tape-worm. It is given in powder after a purgative, and while fasting.

Delphinium (larkspur), seed changed for the root.

Enonymus (wahoo), on trial as a diuretic and tonic. It destroys vermin in the hair effectually.

Gelseminium is an indigenous plant, and is said to be an energetic nervous tonic without astringent, nauseating, or purgative properties. There is claimed for it also the property of reducing the force and frequency of the pulse.

Gossypii radix (cotton root) is intended as a substitute for ergot.

Hydrastis possesses energetic tonic properties.

Rottelera (kameela) is a cathartic vermifuge, and may be used in lieu of kousso or pumpkin seed in tape-worm.

Scutellaria (scull cap) is an antispasmodic, and is considered as a specific for chorea. It is used in infusion.

ACETA.—*Acetum Lobeliæ* is a preparation which is the most convenient for preserving the active principles of the plant. The same may be said of *Acetum Sanguinariæ*.

Acetum Opii is changed in formula but not in strength.

ACIDA.—*Acidum Hydriodicum dilutum* is a valuable preparation of iodine when the stomach is irritable. *Acidum Muriaticum dilutum* is introduced for foot-baths, and should always be used fresh. *Acidium Phosphoricum dilutum* is a valuable nervous tonic. *Acidum Sulphurosum* (sulphurous acid diluted with water) is used as an application for the destruction of parasitic growths. *Acidum Valerianicum* is for making the valerianates.

ÆTHERA.—*Æther Fortior* is the pure ether, and *Chloroformum purificatum* the pure chloroform, both of which are used for anæsthetic purposes.—*Am. Med. Times.*

INVESTIGATIONS TOUCHING THE USE OF IODINE.

Dr. Rosenthal, assistant physician at the Vienna General Hospital, has published, in the *Wiener Med. Wochensch.*, a series of papers containing much original matter touching the therapeutic use of Iodine. The summing up is as follows:—

1. Large doses of iodide of potassium, combined with a small quantity of fluid, remain a long time in the economy; with large quantity of fluid, they are quickly washed away from the system and pass rapidly into the secretions and excretions. This circumstance should be carefully noticed.

2. When iodide of potassium is taken internally, it is found, not only in the urine, saliva, and other secretions, but also in the alvine evacuations, within from four to seven hours, whether the stools be aqueous or the reverse.

3. In the administration of iodide of iron, iodine is separated in considerable quantities and found with a large proportion of the iron in the urine. Fæcal matter contains much iron and a small amount of iodine. The same phenomena may be noticed when iodide of mercury is used.

4. Frictions with an ointment containing iodide of potassium upon sound skin will cause the iodine to be detached in the urine and saliva.

5. Iodine is found in the urine of those who take baths in which iodide of potassium is dissolved, even when the rectum and urethra are kept free from the action of the bath. This is proved by examining the urine, and by noting a large diminution of the iodine in the water used for the bath.

6. The intestinal mucous membrane takes of the iodine very energetically in the form of enemata, and this is the case even with very weak solutions of iodide of potassium.

7. Large doses of iodide of potassium, or small doses taken for a long time, are not well borne in certain pathological states of the economy; in fact, large doses of iodine, or concentrated solutions, are very prejudicial to the system.

ON FERMENTATION AS A CAUSE OF VARIOUS DISEASES.

M. Polli, of Milan, has recently published two very interesting memoirs on fermentation as a cause of various diseases, from which we extract some of the more important facts.

Chemists who have, of late years, investigated with the greatest success the phenomena of fermentation, have observed that this mode of reaction amongst organic principles has a much greater importance than was suspected. It is, in fact, to fermentation that the spontaneous decomposition of animal and vegetable tissues is due, such as gangrene, dry rot, eremacausis, etc., and the whole series of successive transformations that organic substances undergo until they are converted into water, carbonic acid, ammonia and mineral matters. It is by fermentation that fatty bodies give glycerine; that salicine furnishes glucose; that myronate of potash is converted into essential oil of mustard; that neutral substances, such as urea and allantoin, form ammonia; that amygdaline produces the poisonous substances, oil of bitter almonds and hodrocyanic acid.

Ferments act by contact or by catalysis. Sometimes they are living creatures, sometimes very active substances which are not organized. Diastase, emulsine and pepsine perform the part of ferments. They may cause organic substances to double, become hydrated or isomeric.

According to M. Polli, there exists a great analogy between the processes of fermentation and many organic metamorphoses which occur in some diseases. An albuminous matter which in a particular state of alteration acts as a ferment, and particular substances which proceed from its action; this is the basis of the humoral theory.

But analogy is not sufficient of itself; it has been shown by carefully conducted experiments that the blood in disease undergoes alterations and variations in its composition, and that artificial disease may be produced bearing a strong resemblance to natural disease, by injecting into the blood-vessels substances which act as ferments. Multiple abscesses, induced by the injection of pus into the veins of dogs; septic affections caused by injecting purulent putrid matters into the veins of animals; diseases presenting all the characteristics of typhoid

fever, and caused by the injection of putrified blood into the circulating current; finally, contagious diseases, such as glanders, which is produced by the injection of glanderous humors, are facts which prove that a general affection may be induced by the simple introduction into the blood of a substance capable of acting as a ferment. The diseases which may be called catalytic, in which the morbific matter produces metamorphoses by contact with the alterable principles of the blood are the primary cause of all the symptoms presented by the animal economy. In short, it is impossible to deny that fermentation may be produced in the blood.

But admitting that the starting point of many diseases is the action of a specific ferment in the blood, is it possible to prevent its effects, to render it inactive in the living organism, as we may do apart from the body, by many chemical means? This is the great point which gives interest to this pathological question.

M. Polli believes that he has proved, by a series of facts and conclusive experiments, that it is possible to neutralize morbific ferments in the blood of animals by chemical substances which do not act in a manner incompatible with life; and it is by these substances that we must hope to treat successfully those diseases of which fermentation is the primary cause.

It is well known that sulphurous acid gas prevents alcoholic and acetic fermentation, and also the fermentation of animal substances and organic matters in general. Thus it arrests, if it be already begun, the fermentation produced by saliva and diastase in contact with starch, the fermentation which myrosine produces in the paste of black mustard flour, that which is produced by emulsine on the amygdaline of bitter almonds, etc.

M. Polli has proved that alkaline or earthy sulphites possess the same antiseptic and decolorizing properties. This is a very important fact, since it admits of the application of sulphurous acid in therapeutics. He thinks also, that he has ascertained that the action of sulphurous acid and of sulphites on coloring matters as well as on ferments, is neither a deoxygenation, a combination, nor a destruction, but simply a molecular modification.

This mode of action of sulphurous acid and sulphites explains the valuable property which these chemical compounds possess of preventing or energetically arresting the action of morbific ferments artificially introduced into the blood of ani-

mals, without altering its composition in such a manner as to be incompatible with life.

From a great number of experiments made upon dogs, and alluded to in his memoirs, M. Polli has determined the safe and efficacious dose of sulphites for internal administration, the changes which they undergo in the organization, and their curative action in the affections produced by the injection of putrid or contagious matters into the blood.

The following are some of his experiments, selected from those of the last-mentioned series:

1. Ten grammes of sulphate of soda were given to a dog during a period of five days, then one gramme of pus was injected into the femoral vein. The animal became dull, and refused the food which it was offered, but the next day its spirits returned and it ate willingly. Two days after, the same experiment was repeated and was followed by the same results. At the end of a few days the animal was perfectly cured.

2. One gramme of pus was injected in two portions into the veins of a dog of a more robust nature than that operated upon in the preceding experiment. The animal became spiritless, but the next day took some food; the following day it was very low, it breathed with difficulty, its wounds were sanious, its leg and foot swollen, and it died ten days afterwards.

3. An equal quantity of putrid blood was injected into the veins of three dogs; one died five hours after the infection, another after five days of illness, and the third, to which some sulphate of soda had been administered, after having experienced some trifling symptoms of illness, rapidly recovered.

4. Numerous other experiments made with putrid blood and morbific mucus proved that the animals died with all the symptoms of a general infection, whenever sulphite of soda was not administered, and that, on the contrary, they speedily recovered under its influence.

If these facts should be confirmed by other experiments, M. Polli will have rendered an inestimable service to therapeutics, and will have thrown some light on the yet obscure cause of numerous diseases.—*Pharm. Jour. and Trans.*, London, April, 1863, from *Journ. de Pharm. et de Chimie.*

NITROUS OXIDE AS AN ANÆSTHETIC.

The attention of the profession has been directed within the last few months, to this agent for the production of anæsthesia. It is claimed by those who have experimented with it, that it is very efficient, operating rapidly, almost as much so as chloroform, and with perfect safety; no serious accident yet having occurred from its use. Patients are as easily controled while under its influence as any other anæsthetic agent.

The manner of its action we conceive to be very different from that of chloroform or ether; during the administration of the latter, the tendency is to deprive the blood of the ordinary amount of oxygen, while the former increases it. While death even *might* ensue from asphyxia under its full influence, yet its operation upon the nervous system, and especially upon the nerve centres, is certainly attended with far less danger than chloroform or ether.

The manner of administering it seems to constitute the greatest objection to its general use. With appropriate apparatus it is easily prepared, but it requires large space; three to six gallons being required for each case. The apparatus and mode of administration are being simplified, and it is presumable that this will be so far accomplished, that there will be no special objection in this direction. All the apparatus, with instructions for using it, is furnished by parties in New York, and other points. We hope all who have opportunity will experiment and report. T.

SUGAR AS AN ANTHELMINTIC.

M. Debout says that sugar is an excellent destroyer of worms. He once accidentally put sugar instead of salt on a leech which he wished to detach from the skin, and was surprised at the spasms produced by it. He therefore tried sugar on earth-worms, and found it had a similar powerful effect; and has since used it in solution with success as an injection in children.—*British Med. Journal.*

ON AN IMPROVED MODE OF USING

REFRIGERATION AS AN ANÆSTHETIC AND AS A REMEDY.

By JAMES ARNOTT, M. D.

It is now, I believe, universally admitted that, by the application of intense cold, pain may be certainly prevented in the numerous operations in which the incision is confined to the skin and the superficial textures; and few will dispute that, in these operations at least, its perfect safety gives it a great advantage over ether or chloroform. But the general opinion is, that it is more troublesome to use than chloroform, and that it is more apt to fail in producing anæsthesia from some oversight or error in the application. This idea has prevented many from employing refrigeration, except in cases where the patients have objected to chloroform, or where there was more than the ordinary risk from its use. In hospital practice, the longer time occupied in effecting congelation has made chloroform to be preferred in almost every case. In consequence of this, many deaths have occurred from the administration of the latter in the most trivial operations—in the extraction of a toe-nail, the opening of an abscess, or the cutting off a wart.

There is nothing singular in this objection, arising from the supposed difficulty or trouble in the use of intense cold. Some of our most valuable remedies have only become generally adopted when the mode of administering them has been simplified. Artificial respiration, galvanism, and several measures resorted to in the treatment of stricture and stone, may be adduced as examples. But the most striking instance of this is found in a therapeutical agent more nearly connected with our present subject. Although sulphuric ether, when properly employed, is not inferior as an anæsthetic to chloroform, the greater trouble attending its administration would have probably very much lessened the use of etherization, had no easier mode of effecting it been discovered. Chloroform is more dangerous than ether, and has on this account been banished from some of the principal hospitals in North

America and France, yet so much valued by the great majority of surgeons is its greater ease of administration, that the honor of discovering this means of facilitating anæsthesia has been almost as keenly contested as that of the great discovery of etherization itself.

Congelation has hitherto been generally produced by placing the freezing materials on the part to be benumbed. In order to ensure success, care must be taken that the ice shall be well pulverized and rapidly mixed with the salts constituting the frigorific. The mixture must be applied by means of gauze, or some other thin permeable material; and when the part is not in a horizontal position, a gutta-percha cup fitted to it may be required to keep the frigorific in contact with the skin. Now, all this trouble may generally be avoided by the adoption of an expedient similar to that employed in the therapeutical application of extreme heat. It is rarely the case that a burning substance is applied directly to the part; instead of this, an iron, which has been previously heated in the fire, is used. In a similar way, an iron, or a brass, or a copper implement, of appropriate shape, may be previously cooled in a freezing mixture, and applied with the greatest accuracy to any accessible part, in whatever position this may be. A small, flat, laundry iron, which may be used for pounding the ice, will also answer in a great many cases as the refrigerator. If an extensive or continued refrigeration is required, two such irons, immersed in a semi-fluid mixture of two or three pounds of ice and salt, may be necessary to replace each other, just as two hot irons are often required for cauterization.

When a metallic body of this description has been cooled to below zero of Fahrenheit, it will often arrest the circulation of the skin the instant it touches it; but more frequently it must be moved and gently pressed on the part for a few seconds, so as to bring a continuous fresh surface in contact with it while the blood-vessels are compressed.

Another expedient, partly resembling that just described, and partly that hitherto in use, consists of a thin metallic bottle, (tinned iron or aluminium,) completely filled with the frigorific mixture. A Florence flask will sometimes answer the same purpose.

I think the above description is sufficiently minute, and that the surgeon, by the adoption of this method, will no longer have to complain of difficulty or trouble in using congelation, either entirely to prevent pain in minor operations, or to pre-

vent the more acute portion of pain, or that arising from incision of the skin, in operations of a deeper or severer kind. In the preface to his work, entitled "Ten Years' Operative Surgery in the Provinces," Mr. Prichard states, that he "refuses chloroform in the lesser operations wherever ice and salt can be conveniently applied." By means of the metallic refrigerator almost every part will be accessible. The complaint made by Messrs. Perrin and Lallamand in their recent and very complete work on "Surgical Anæsthesia," that congelation has been too much restricted to certain operations, will probably, by this improvement of the process, have no longer any foundation; but that, if I may be allowed to use the words of these writers, "on peut prévoir le moment où, grâce à la réfrigeration, l'anesthese pourra être étendue à toute la pratique usuelle de la chirurgie" (page 651).

It is not, however, in being a safe anæsthetic that the principal value of congelation consists. I am anxious to see it employed as a prompt and certain antiphlogistic in all accessible inflammations. The extraordinary remedial powers of congelation in the various forms of chronic rheumatism, which I have related in former publications, may be attributed partly to its anæsthetic and direct antiphlogistic virtues, and partly to the peculiar counter-irritation which it excites. As promptness of action is eminently characteristic of this remedy, it would be especially serviceable in many of those inflammatory and painful diseases to which soldiers and sailors are liable, and which are at present cured with so much difficulty as to render them long unfit for their duties. Amongst these may be reckoned sprains and inflammatory affections of the joints, wounds, irritable ulcers, headache, lumbago, and other painful affections, inflammation of various glands, ophthalmia, erysipelas, and other diseases of the skin.

Being convinced, from no little experience, that a short application of intense cold, produced by a frigorific mixture of appropriate strength, constitutes a certain and speedy remedy of every accessible inflammation, as well as a means of preventing pain in operations, without the risk of sudden or (which has been much more frequent) consecutive death attending chloroform, I do not deem that portion of my time misspent which has been employed in devising and describing such a simple and easy mode of making this application as may lead to its general adoption.—*Med. Times and Gazette.*

AN EASY METHOD OF REDUCING A DISLOCATED HUMERUS.

Dr. Garms describes the following modification of Cooper's procedure. The patient is laid upon the floor, not on his back, but on his belly, some cushions intervening. A towel is attached to the humerus above the elbow, and another, passed round the upper part of the humerus, is given into the hands of the assistant, standing on the side of the dislocated arm. The operator, sitting down on the floor, on the same side, lays hold of the lower towel, and applies the heel of the foot lying nearest the patient to the axilla. He makes extension backwards and downwards, while the assistant draws laterally. The dislocation is thus reduced with surprising facility, the agency of chloroform not being required. The advantage of this modification is that extension backwards may be far more easily executed than when the patient is in the supine position; and this is the direction required in dislocation forwards, which prevails in the great majority of cases. For dislocation backwards, which is very rare, Cooper's is the best.—*Brit. and For. Med.-Chir. Rev.*, July, 1863, from *Archiv. der Heilkunde*, No. 2, 1863.

AMAUROSIS FOLLOWING PARTURITION.

Dr. Eastlake communicated to the Obstetrical Society of London, (April 1, 1863,) a case of this. This phenomena had occurred on seven previous occasions under the same conditions, but it did not appear after the first labor. The patient was married, and thirty-four years of age. The blindness, which was total, occurred in both eyes suddenly about the third day after the birth of each child, and lasted on an average from three to five weeks. The patient had never lost more than the normal quantity of blood; she had never taken ergot; there was no suppression of the milk or lochia, nor was the urine albuminous. A careful ophthalmoscopic examination had been instituted, but the evidence adduced was entirely negative. Dr. Eastlake regarded the case as unique, and concluded his paper by stating that the only author who had described any case at all similar, was Beer, in his "Lehre der Augenkrankheiten."—*Lon. Lancet: Amer. Jour. Med. Sci.*

EDITORIAL.

To Our Patrons.—The present number commences the 21st Vol. of the CHICAGO MEDICAL JOURNAL, counting the aggregate of the different series. The custom that has formerly obtained, when its proprietorship has been changed, of repeating the numbers of the volumes, but making them of a new series, has been productive of inconvenience, and we have therefore thought best, as making the reference to any particular article more easy, to number this volume in accordance with our whole issue, and we hope in future that this practice may not be changed. Few publications of any kind in the North-west have had a continued existence so long as this, and in the whole nation, but a small number of medical ones. It was established when Chicago was but an inconsiderable town, and the garden of the North-west but little inhabited. It has witnessed the transformation of this small town into a substantial city of more than 150,000 inhabitants, and with a business greatly disproportionate to the number of its people. It has seen the then unoccupied virgin prairies, fructified by the touch of industry, suddenly teeming with vast wealth, and inhabited by a numerous people, unsurpassed for intelligence, enterprise, courage, and fidelity to their country. In the profession, it has witnessed changes of a no less salutary nature, and of equal magnitude, with the material resources of both city and country. The JOURNAL has been a medium of communication between members of the profession embraced in a wide extent of country, and to the very marked progress made during this period, in scientific attainment, in medical knowledge, and practical skill, it may justly claim to have contributed its share of influence. We predict that the two decades to come will bring progress no less marvelous than the

two that are past, have shown—and with those who shall carry on this work, the JOURNAL will be a faithful co-laborer, as in times gone by. We are under great obligation to the profession for the steady support they have always so generously accorded us. Our list of subscribers has constantly increased, while remittances of pecuniary aid have been more and more prompt and universal.

We hope to make the current volume an interesting and useful one. We are promised a series of articles from Prof. Brainard on ununited fractures. We shall publish a series of Dr. Holmes' clinical lectures before the class of Rush Medical College, on the diseases of the eye, the first of which will be found in the present number. Other able writers have promised us contributions, and we solicit communications from all who will favor us by transmitting interesting articles for our pages. With this number we send bills for all dues up to the present volume—and though the bill for this is withheld, our patrons will not forget that our terms are *payment in advance.* Though most of our subscribers have paid with praiseworthy promptitude, yet a few are considerably in arrears. To all, this number will be sent, but those who have unpaid bills of much amount, and which shall remain unpaid on the issue of the next number, will have their names struck from the list, and the bills will be given to an agent for collection.

Pneumonia.—This disease has prevailed in the city to a considerable extent during the last two months. The sudden fatal termination of several cases at near the same time, in families of extensive acquaintance, led the public to believe that a new or unusual epidemic had appeared, which defied medical treatment. There is reason to suppose that treatment is sometimes too much influenced by the name of the disease. And in none, perhaps, is the error more pernicious than in pneumonia. When the symptoms and signs lead to the diagnosis of inflammation of the lungs—the mind at once reverts to the principles of treatment applicable to the phlegmasia,

and Venesection, Tartar emetic, Calomel, &c., are at once likely to be applied with an activity equaled to the intensity of the attack. The physician who has seen much of this disease in its adynamic type, will be at no loss to predict the result of such practice.

It has been our fortune to meet with a number of these cases recently, in all stages, from the first onset to symptoms indicative of impending collapse, and we have seldom been more forcibly impressed with the efficacy of the *sustaining* treatment than in this disease during the present season.

There is little room to doubt that the fear of tonics and stimulants in the early stage of inflammation, has allowed many patients to sink too low with Typhoid Pneumonia to be restored by any means. With us the conviction is firmly fixed, that the idea of *antiphlogistics* in the treatment of this form of pneumonia cannot be banished too soon from the mind.

We have in more than one instance seen the dry skin become relaxed and moist—the quick, hard pulse become slow and soft—the hurried and difficult respiration become free and regular—the dusky hue of countenance disappear and the clouded intellect become clear under the influence of Quinine, Opium, stimulants and a nutritious diet.

Two grains of Quinine with five grains Dover's Powders may be given every four hours—varying the dose, to meet the emergency of the particular case—after the first day or two stimulants may be added in quantity proportioned to the tendency to prostration of the vital forces of the system, and their effect upon the patient. When the surface becomes a little relaxed and the patient suffers pain then a blister over the seat of pain will afford manifest relief.

This is a hasty outline of the plan which with us has demonstrated that this serious disease which tends to rapid prostration, is amenable to treatment. We are forced to the conclusion that the physician will succeed best by omitting depressing agents, and not fearing to use sustaining remedies even in the early stage.

Vaccination and Re-Vaccination.—The increasing prevalence of Smallpox and Varioloid throughout the country is a sufficient reason for calling the attention of the profession, and through it, that of the public, to the importance of attending to *Vaccination* and *Re-Vaccination.* There is reason to believe that many persons have suffered unnecessarily, by reposing in a false security, they having been subjected to spurious vaccinia. The following "conclusions" enumerate the conditions, and the protective influence of a perfect vaccination:

In 1845, the Academy of Sciences of Paris published a Report, containing the following conclusions: 1. The protective influence of vaccination is complete as regards the great majority of the vaccinated, and temporary as respects a small number only; and in these latter it is almost absolute up to the period of puberty. 2. Smallpox rarely attacks the vaccinated before the age of ten or twelve; and it is from this age to thirty or thirty-five that they are chiefly exposed. 3. That in addition to its preservative influence, vaccinnation endows the constitution with an influence which renders the symptoms of small-pox much milder and of shorter duration. 4. Cow-pox, directly or recently derived from the cow, is attended by a much more intense local phenomenon, and by a more certain and permanent effect than that which has passed through a great number of human subjects, this intensity of local action subsiding after many successive vaccinations. 5. The preservative influence of vaccination appears not to be intimately connected with the intensity of its local effects; nevertheless, in order to preserve the properties of vaccinia unimpaired, it is prudent to renew it as frequently as possible from the cow. 6. Re-vaccination is the only means we possess of distinguishing the complete success of vaccinia from the less complete grades of protection. 7. Re-vaccination, however, is not certain evidence that the vaccinated in whom it had succeeded would have been destined to contract smallpox, but merely that it was probably among those that this latter malady was most likely to appear, if they became exposed to its infection. In ordinary times re-vaccination may be practised after fourteen years; during epidemic small-pox it may be practised after a shorter period.

The Morton Fund Association.—A systematic and determined effort is being made by the physicians of Boston, to obtain an appropriation by Congress, for Dr. Morton, the alleged discoverer of Ætherization, to reimburse him for outlays in discovering, defending his claim—and vainly endeavoring to obtain some pecuniary consideration, from the same source—and to remunerate him for the great benefits derived from the discovery, by the public and especially by our soldiers in the field. The association having the matter in charge comprises many of the leading physicians of Boston. They hope to influence the action of Congress by inducing physicians throughout the country to exercise their personal influence on the Representatives from their particular district. It will be well for Dr. Morton if Congress can be led to act upon the principle of the adage, "*Bis dat qui cito dat.*"

Resolutions of the Medical Class.—At a meeting held by the students of "Rush Medical College" for the purpose of considering the death of our fellow student, Mr. R. L. Smith, the following preamble and resolutions were presented and unanimously adopted:

WHEREAS, In the providence of God our young friend and classmate, Mr. R. L. Smith, has been by death removed from our midst, thereby suddenly cutting short, while in the midst of preparatory study, that hope of future usefulness cherished by himself and friends, therefore,

Resolved, That while we mourn his loss as a classmate and companion we will cherish his memory with much respect.

Resolved, That we tender our deepest sympathy to the family and friends of the deceased in this hour of their affliction.

Resolved, That a copy of these resolutions be transmitted to the father of the deceased; and also the "Chicago Medical Journal" for publication.

H. C. HOLLINGSWORTH,
G. B. LESTER,
J. W. THAYER,
J. A. WILLIAMS,
M. JENKINS,
} *Committee.*

Resignation of Professor Trousseau.—Prof. Trousseau has offered his resignation as Clinical Professor in the Faculty of Medicine which he has so ably filled for upwards of thirty years, being, he says, now turned of 62, and because to perform the duties of the chair, as he has always done, will demand an amount of labor for which his strength and activity will not much longer suffice. The students, however, are not willing to part with their professor, and have petitioned the Minister of Public Instruction not to accept the resignation.

An Agreeable Surprise.—The Medical Class of the Buffalo University recently presented their Prof. of Anatomy, Dr. Eastman, with a valuable horse, as a testimonial of their "regard for him as a faithful friend—a thorough teacher—and christian physician." Although "taken entirely by surprise," the Doctor accepted the token in very befitting terms.

Scarlet Fever in England.—London is at present suffering from a more formidable epidemic of scarlet fever than has prevailed there for upwards of twenty years, and the disease is rife all over England. Of the total number of deaths in London during the first eight months of the past year, one in every fourteen was due to scarlatina.

Number of Physicians in Chicago.—We see, by the *Tribune*, that the number of physicians in Chicago, at the close of the year 1863, was three hundred and twenty-two—about one to every five hundred of the inhabitants. This fact may be of interest to our professional brethren who are contemplating to locate among us.

Receipt for a Deep Black Ink.—The *Chemical News* gives the following recipe, which may be useful to our country readers: Take 14 ounces of powdered galls, 5 ounces of powdered gum Senegal, 6 quarts of distilled or rain water, 6 ounces of liquor of green vitriol free from copper, 1 drachm

of liquor of ammonia and 8 ounces of spirit of wine; mix these in an open vessel, and allow them to stand, stirring frequently, until the ink attains the desired blackness. This ink will not corrode steel pens.

Health of the Army.—The following extract comprises all that is said in the report of the Secretary of War to Congress, of the Medical Department of the Army:

By the report of the Acting Surgeon-General, the department is informed that the latest reports received give one hundred and eighty-two general hospitals, with a capacity of 84,472 beds. The number of patients remaining in general hospitals June 30, 1863, was 9-1 per cent., and in the field 4-4 per cent. of the entire mean strength of the army, of whom 11 per cent. were sick, and 2-5 per cent. wounded. The corps of medical inspectors, by the system of inspections established, has added materially to the efficiency of the medical and hospital service, and a marked improvement in all matters of sanitary precaution and police is exhibited. Companies of the second battalion, invalid corps, have in many instances been advantageously substituted for contract nurses, attendants, and cooks in the general hospitals. Appropriations are asked for the payment of washing in those hospitals and on transports, where a sufficient number of matrons cannot be employed; for the collection and preservation of pathological specimens in the army medical museum; and for the preparation and examination of drugs, in connection with the purveying depots. The health of the troops has been good, and the mortality less than the preceding year.

Syphilis conveyed by Vaccination.—Two instances of this have lately occurred in Paris. One of these was related to the Surgical Society of Paris by M. Chassaignac; and the other by M. Hirard to the Medical Society of Hospitals.

☞ Business letters to the JOURNAL should be addressed to Drs. MILLER & INGALS, Chicago, Ills., P. O. Drawer 5787. When money is received a receipt will be returned with the next number of the JOURNAL, and subscribers failing to get such receipt will confer a favor by giving us notice of the omission.

BOOK NOTICES AND REVIEWS.

Outlines of the Chief Camp Diseases of the United States Armies as observed during the Present War—A Practical Contribution to Military Medicine. By JOSEPH JANVIER WOODWARD, M. D., Ass't. Surgeon U. S. A.; Member of the Academy of Nat. Sci., Phila.; of the Pathol. Soc., of Phila., etc., etc. Philadelphia: J. B. Lippincott & Co., 1863; pp. 364. $2.50.

The author of the present treatise is already known to the profession by his successful little work—the "Hospital Steward's Manual," and by his connection with the laborious duty of preparing for the Medical Department of the Army "The Medical History of the Rebellion." His official relations have necessarily involved earnest thought upon the subject of Camp Diseases, and with them he had previously acquired practical familiarity by actual service in the field. The book before us is essentially a practical one, and is worthy a place among the field books of the army surgeon, whilst in its pages the civil practitioner will find much valuable information for every day use.

Something of the kind had grown to be a necessity, for the formulæ of the text books on practice are confessedly wholly inadequate to the exigencies of the present time, either in camp or civil life. It is an *avant courier* which heralds the coming of the elaborated results of the grand experiences of the war.

In its general tenor, the book runs parallel with the ideas of Hygienic and Conservative Medicine now generally in vogue—ideas which are a healthy reaction from the formularized specifics, perturbations, and destructive methods of preceding practice. The consolidated facts, afforded by the war, have mercilessly overthrown a host of idolized old dogmas. After alluding to the fears generally entertained at the outset of the war, that our camps would be scourged by the same

pestilences which have, again and again, devastated European armies, and that in the change of climate and habits, incident to the progress of the Northern arms Southward, tropical diseases would produce greater havoc than the attacks of the enemy, he gives a brief account of the system of classification of diseases adopted by the Medical Department and some general statements as to the prevalency of each classified form as gathered from the official statistics.

The great conditions determining the character of Camp Diseases are threefold: Malarious, (Roino-Miasmata); Typhoid, (Idio-Miasmata); and Scorbutic. The productive agency of each of these and their blended agency are sketched perspicuously and forcibly. The blended product is known officially as Typho-Malarial Fever, and its history, including treatment, is given in concise and clear terms. Then follow sections upon Intermittent, Simple and Congestive; Chronic Malarial Poisoning; Jaundice; Camp Diarrhœa; Simple Diarrhœa; Acute Entiritis; Acute Dysentery; Chronic Diarrhœa; Camp Measles; Catarrh; Pneumonia; Pseudo-Rheumatic Affections, and, finally, an Appendix.

We strongly recommend the perusal of these chapters to the student of medicine, the army and civil practitioner, as containing a fund of fact, common sense and practical information nowhere else to be found in print. The general adoption of the hygienic and therapeutic methods recommended would go far to lessen both the sickness and mortality of the army, already inconsiderable when compared with any other of even approximate magnitude which has stood upon the face of the planet.

We are gratified to see that the author takes high and broad grounds against the absurd wholesale "Quinine prophylaxis" whilome, so strongly urged by sundry parties. He abjures it almost *totidem verbis* with this JOURNAL when the war began. A.

A Manual on Extracting Teeth—Founded on the Anatomy of the parts involved in the operation; the kinds and proper construction of the instruments to be used; the accidents liable to occur from the operation, and the proper remedies to retrieve such accidents. By Abraham Robertson, D.D.S., M. D., Author of Prize Essay on Extracting Teeth, &c. Philadelphia: Lindsay & Blakiston, 1863.

The title page of this little volume explains very fully its objects. From a rapid perusal we have no hesitation in saying the objects have been attained. The importance of the subject will be fully appreciated by every one who is compelled to submit to the unpleasant and painful operation for the removal of a tooth, and the importance also of its extraction with the least exertion, with the least amount of force by the operator, with the least possible injury to the surrounding parts, and consequently with the least amount of present pain and subsequent suffering to the patient.

After the introductory chapter—The Anatomy of the Jaws and Teeth. Pathology of Toothache. Instruments used for extracting teeth, and the proper method of using them. Of lancing the gums. Accidents attendant upon the extraction of teeth, and their remedies. And Anasthetics, each form the subject of a distinct chapter, which may be consulted with advantage by the physician as well as the dentist.

For sale by S. C. Griggs & Co. Price $1,00.

Transactions of the Eighteenth Annual Meeting of the Ohio State Medical Society—Held at Ohio White Sulphur Springs, June 16, 17, 18, 1863. From E. B. Stevens, M. D., Secretary.

The proceedings of the three day's session of this Society evince a commendable zeal in what its members conceive would advance the science of medicine and elevate the profession. A number of Reports and Essays, of real merit, were read, among which are the following:

The Valedictory Address of the President, J. W. Russell, M. D.

On the Employment of Electricity in Midwifery, by D. S. Gaus, M. D.

On New Remedies, by E. B. Stevens, M. D.

On Mollites Ossium, by N. Dalton, M. D.

On Adipose Tumors, by A. McBride, M. D.

Some of these productions deserve, and did our limits permit should receive a more extended notice—we may recur to them in a future number.

A list of the members is appended, making together a volume of which our neighbors of Ohio may well be proud.

Mental Hygiene. By J. Ray, M. D. Boston: Ticknor & Fields, 1863.

This work does not claim to be a systematic treatise on *Mental Hygiene*, but to expose the mischievous effects of many practices and customs prevalent in modern society; and to present practical suggestions relative to the attainment of mental soundness and vigor. It contains many facts, and enunciates important principles and suggestions, which will be red with interest and profit by the public and the legislator as well as the physician.

Price $1.00. For sale by S. C. Griggs & Co., 39 & 41 Lake street.

Journals and Pamphlets Received.—London Lancet, Cincinnati Lancet and Observer, Medical News, Journal of Ophthalmology, Pacific Medical and Surgical Journal, Canada Lancet, Druggists' Circular, Boston Medical and Surgical Journal, American Medical Times, Medical and Surgical Reporter, Buffalo Medical and Surgical Journal, Transactions of Ohio State Medical Society, Circular and Catalogue of the Long Island College Hospital, The Dental Register, Catalogue of the Berkshire Medical Institute for the year 1863.

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ORIGINAL COMMUNICATIONS.

ARE VARICOSE VEINS A CAUSE OF POST PARTUM HŒMORRHAGE?

By J. W. BROOKS, M. D., Chicago.

If the following suggestions are novel, they may not be wanting in utility, should they lead to a more thorough investigation, of post partum hœmorrhage, as connected with varicose, of the uterus, uterine appendages and lower extremities. At this point we may very properly take a brief glance at the venous anatomy of the uterus, and then follow with cases illustrative.

The veins of the gravid uterus are numerous and much dilated and flattened like sinuses, the largest of them are termed sinuses. They consist of the usual lining membrane of the venous system surrounded by the muscular fibres of the uterine parenchyma which invest them as a second coat. They are arranged in several planes, and those of each plane have frequent anastamoses with each other, whilst those of one plane inosculate with those of another plane, forming a grand venous network.

There is this anatomical peculiarity in the venous system of the uterus: Many of the veins open upon the internal surface of the uterus by well defined orifices. They transfix this surface very obliquely with valves at their orifices, which are especially numerous and large upon that portion of the uterine surface to which the placenta is attached.

The only valves belonging to the uterine venous system so far as the writer is aware, are those at the orifices, and those at the points of inosculation, between the veins of the different planes. We believe with Prof. Owens, that "the foramen by which a venous tube communicates with another lying immediately beneath it, in the uterus, is not in the sides, but in the floor of the superficial vein, and working down in it from above." We see the canal of the vein below partially covered by a semi-lunar falciform projection, formed by the lining membrane of the two venous tubes as they meet at a very acute angle, the lower tube always opening very obliquely into the upper. That these valvular arrangements, by obstructing the retrograde movement of the venous blood, operate efficaciously in preventing uterine hœmorrhage, cannot be doubted, in the various exigencies of pregnancy and parturition. Let a varicose condition of these veins exist, and what will be the inevitable consequence? The answer will be found by ascertaining after a fatal case of post partum hœmorrhage attended with varicose veins, the condition of the veins and sinuses, together with the condition of the valvular orifices and the valves at the points of inosculation.

Especially will the case appear clear if the placenta has been attached, so as to involve part of the healthy and part of the varicose side.

From several cases that have occurred to the writer, we will present three as representative ones:

Case 1st—Was called in consultation with Dr. F., June 11th, 1851, to Mrs. F——n, in consequence of post partum hœmorrhage. Found her in articulo mortis on arrival, breathing but a few times, labor having been terminated

about one hour previously, the child a male, healthy. The history of the case as derived, was briefly this: The lady was married at twenty, and was at the time thirty-eight years of age. She had borne eight children previously, and enjoyed uniformly good health. Her labors had been comparatively easy and she had hitherto made good recoveries. The present labor had lasted about three hours, without unusual occurrence, till after the delivery of the placenta, when the blood flowed profusely and persistently; cold applied externally not checking it, and the uterus meantime alternately contracting and relaxing. Sectio. Cadaver, thirty-six hours after death. Body was well formed and developed, ex-sanguine. There were large varices extending from the foot to the inguinal region of the right side. Rigor Mortis was complete. On opening the abdomen the parts were normal, if we except the ex-sanguiousness, and the uterus: This was not fully contracted, and a marked difference existed in the two lateral halves. On the external part of the right side, embracing the right appendices uteri, the veins appeared much as they did in the labia externa and through the right lower extremity. Dividing the uterus on the mesian line, we found the placenta had been attached about equally on either side of the mesian line. The veins of the left side seemed in a healthy condition, the valves normal, and small coagula were found within the valves where the placenta had been attached. Not so the right side: Here the veins and sinuses appeared from twice to four times the size of the corresponding ones of the opposite side. The valves where the placenta had been attached were almost entirely effaced. There was scarcely a coagulum within the veins or sinuses. The valves at the points of inosculation between the planes were similarly diseased, while the veins appeared like the other varicose veins. The heart and other organs were perfectly healthy.

Case 2nd—Was called to Mrs. C———, March 10th, 1855. Found Dr. O——r in attendance. The child, a fine healthy girl, had been delivered about one hour and ten minutes. Dr.

O. reports flooding as having commenced soon after the birth of the child. It continuing, he depressed the head, elevated the pelvis, and applied cold to the uterine region without apparent good result. Alarming prostration supervened, upon which he introduced a piece of ice, enclosed in an oiled napkin with no relief. On my arrival death was evidently near. The veins of right leg, the mesh below Poupart's ligament and those of the right labia were almost universally in a varicose state. We attempted the use of solution of Sulphate Ferri as a styptic locally, but with very little result. Life was ebbing rapidly, and in just twenty minutes from my reaching the bedside she ceased to breathe.

The following brief history of the case was gleaned: She was married at 24, and was at the time 35 years of age. She had never seen a sick day except very slight indisposition attending five previous confinements with living healthy children. The first notice of varicose veins was during her fourth pregnancy, but there was no hœmorrhage during or after labor more than ordinarily attends. During the fifth the varices were much larger, but the labor was easy and the recovery good. During the sixth the varices were still increased, especially near the inguinal region, and she complained of a constant uneasiness in the right abdominal region, and her expression was that she had the same feeling in it that she had in the varicose veins below. In all other particulars she felt well.

Sectio. Cadaver, 30 hours post abeit. A beautifully developed female form presented, ex-sanguious. Traces of the varices were still to be seen on the limbs, &c. On opening the abdomen the appearances were nearly a fac simile of Case 1st. On section of the uterus we found the placenta had been three-fourths of it attached on the right side. To describe the appearances of the valves, sinuses, &c., would be to repeat what has already been described in the preceding case. Other than this every thing appeared perfectly healthy.

Case 3rd—Mrs. E——— was at the period spoken of 41

years of age and had been always delicate, and is of a nervo-sanguine temperament. She had borne nine children. During her eighth pregnancy some varices appeared on the right leg, and extended to a point just below Poupart's ligament, and involved the veins of the right labia. Her labor was natural, no unusual hœmorrhage attended and she made a good recovery. So also was the case in the ninth period of gestation and accouchment. She conceived again in May, 1858. In August was called to see her in consequence of her experiencing dull pain, deeply seated in the right inguinal region, and extending from thence downward, through the right side of the vagina, the right labia, and thence to the ancle. She says the pain is greatly relieved by the recumbent posture. On examination small varices were found just above the right malleolus externus, at and just below the poplitcal region, on the outside of the thigh at the junction of the lower and middle third of the femur, in the fold below Poupart's ligament, between the right external labia and the thigh, in the right labia, and in the venous system of the right side of the vagina, with a knotty feel of the right side of the neck of the uterus. She was enjoying her ordinary health. Directed a flannel bandage one and a half inches wide to be applied to the limb before rising in the morning, to exercise moderately, and to recline a part of the time during the day. In November was called again. She then stated that she had found much relief by the course prescribed. She was at this time suffering from a sensation of weight and tenderness in the right abdominal region, and spoke very positively of her belief of its location in the womb, and that her child was on the other side.

Stethescopic and tactile examination soon convinced me that the placenta was attached on the right lateral half of the uterus. The sounds observed were peculiar, and not easily described. Fearing diseased valves and varicose veins, I directed her exercise to be gentle, her diet mild, with instructions to recline often, with the request to be summoned to her

side on the first intimation of labor. If labor occurred with hœmorrhage, that her hips be raised and her head depressed. Labor commenced in accordance with her reckoning, Feb. 10th, 1859. Every thing progressed favorably until after the birth of a son, when moderate hœmorrhage commenced. The placenta remaining and little or no contraction of the uterus having taken place, we dropped the head and elevated the pelvis and extremities, and then tried to induce contraction by the application of ice to the hypogastrium, and at intervals grasping the uterus through the abdominal parieties. These means partially abated the hœmorrhage. In thirty minutes from the delivery of the child syncope approached and alarming prostration. I directed an assistant to compress the abdominal aorta, and proceeded to deliver the placenta, which was found abnormally attached to the right side of the uterus. On separating the attachment the hœmorrhage was fearful. The orifices of the bleeding vessels were manifest to the feel. With the withdrawal of the placenta the uterus contracted briskly and then relaxed, continuing alternately to contract and relax until in the course of twenty minutes it assumed near a normal size, with little wasting. Pressure was continued fifteen minutes longer, and then was very gradually removed.

She was retained in the above position for twenty hours, at the expiration of which time, the head and pelvis were brought to the same level. She made from this time a gradual, but finally a good recovery, and at this time, January, 1864, enjoys comfortable health. She has always a painful sensation of weight and fulness on the right portion of the uterus, &c., during and for one or two days previous to the catamenial flow. This discharge still being regular at the month.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE OPHTHALMOSCOPE.

Gentlemen: We have before us in the clinic to-day three patients, affected with various diseases, of which it is impossible to make an accurate diagnosis without the assistance of the ophthalmoscope. Before concluding what I wish to say upon diseases of the conjunctiva, I shall ask your attention to some of the principal points in the subject of ophthalmoscopie. You are aware there are two reasons, why it is impossible without the aid of some such instrument as the ophthalmoscope, to obtain a view of the deeper portions of the eye. 1st, On account of the smallness of the pupil, but little light can enter the eye. As nearly all of this is absorbed by the pigment of the choroid, a minute quantity of light only is reflected back through the pupil into the eye of the observer. The conditions are nearly the same in an attempt to look into a dark room through a small aperture in the shutter. Objects behind the iris, as also behind the shutter, are indistinct, or invisible, because they are insufficiently lighted. 2d. The refracting media of the eye so change the direction of the rays of light, as they pass from within out through the pupil, that they cannot meet at a focus on the retina of the observer. As the presence of a double convex lens in the aperture of the shutter, just mentioned as an illustration, increases the difficulty of looking into the room. Now if a piece of looking glass, from the centre of which a small disk of the amalgam has been removed, be placed near the opening in the shutter in such a way, that the light of the sun shall be reflected

through this opening, the rays will fall upon the opposite wall. A person placing his eye behind the center of the reflector can plainly see those portions of the room upon which the light from the glass is thrown.

To throw sufficient light into the eye, so as to illuminate its internal structures and at the same time to so direct, by means of lenses, the rays as they pass back from those structures through the pupil, that they will form an image on the retina of the observer, are the objects of the Ophthalmoscope.

It consists of a small concave mirror with an opening in the centre and a semicircular frame behind it for holding such lenses as the peculiarities in the refracting media of the patient or observer may require. The instrument is used in the following manner: The room being darkened and a lamp with sufficiently strong light being brought near the patient's ear, the observer places the centre of the mirror directly before his own eye and inclines the mirror in such a way, that the rays of light from the lamp will be reflected into the pupil of the patient. It is usually necessary that the eye of the observer should be six to fourteen inches from that of the patient, the distance varying according as the patient or observer is far or near sighted. In this way an erect image of the retina can be obtained, so much magnified that but a small part of it can be seen at once. A slight movement of the instrument perpendicularly or horizontally will bring different portions of the retina into view. In order to examine a large portion of the retina at a glance it is necessary to use the mirror without a lens behind it, substituting a double convex lens of two or three inch focus, held between the mirror and the eye of the patient and very near the latter. It should be remembered that it is generally necessary to dilate the pupil of the patient by instilling a few drops of solution of neutral sulphate of atropine, gr. iv and aquæ ℥j, into the eye ten or fifteen minutes before making an examination. The study of the progress and effects of disease of the different tissues of the eye, as revealed by the opthalmoscope, is one of the most

intensely interesting subjects in ophthalmic science. To acquire perfect facility in its use demands much experience and patient observation. But to enable yourselves to recognise diseases of the crystalline lens and vitreous humor, requires comparatively little labor. Even by means of a piece of common looking glass, used as I have just described in the illustration of the darkened room, you can with a little practice soon learn to detect opacities of the vitreous humor and of incipient cataract.

The ophthalmoscope is principally used in examining diseased conditions of the lens, vitreous humor, retina and choroid. It is occasionally employed in detecting differences of convexity in the different chambers of the cornia, as I shall show you in considering the accommodation of the eyes to different distances and its anomilies. It is well for you before attempting to use the ophthalmoscope to examine repeatedly by simple inspection many normal eyes of different individuals of different ages, in order to be accustomed to notice the condition of the cornea, its distance from the iris, the size and shape of the pupil, and the *color* of the lens, which last, you are aware, in advanced life is normally of a yellowish tint, not to be confounded with the discoloration of cataract. After being able to examine the eye well in this way, you should commence the examination with the ophthalmoscope of patients affected with complete amaurosis, in whom the transparent media are normal. In these cases, the patient will not become fatigued by long and repeated examinations. In this manner you will be able to recognize at a glance when the transparent portions of the eye are normal. The orange red disk which you will observe as you look through the pupil will serve as a guide in recognizing abnormal changes. For example, if you observe small dark spots in the disk situated in the plane of the pupil you may be certain they are situated on the anterior surface of the lens; if situated just back of the iris and near the circumference of the disk, especially if they radiate towards the centre, you may state confidently that

the patient is afflicted with incipient cataract. If, as the patient rotates the eye, you observe dark irregular bodies moving in different directions, especially upwards and downwards, you know that there are floating masses of pigment in the vitreous humor. Sometimes these collections of pigment do not change their relative position, but are fixed in the vitreous humor. Sometimes you are able to detect recent hœmorrhages from the choroid, retina, and other tissues and foreign bodies in the vitreous humor.

I will here call your attention to another mode of examining the eye. If you stand facing your patient, placed in such a position, that the light from a window, or rather from a bright lamp, falling through a double convex lens of two and a half inch focus obliquely upon the eye, will become concentrated in the pupil, you will secure an excellent view of all that is situated in the pupil or just behind it. I advise you to become familiar with this mode of examining the eye, for it is very advantageous as at the same time simple. Thus far the examination of the eye with the ophthalmoscope through a dilated pupil is simple and requires comparatively little practice. The investigation of the abnormal conditions of the retina and choroid, however, is a much more difficult matter. The selection of the right lens and the adjustment of the ophthalmoscope at the suitable distance from the eye, to secure a distinct image, are points of difficulty not readily overcome by the beginner in the use of the instrument. As I have already stated, the most convenient cases for the beginner to examine, are those where there is complete amaurosis and dilatation of the pupil, since a strong light can be thrown into the eye for a long time without fatigue to the patient. The appearance of the retina as seen in the dissected eye has already been demonstrated to you. The fine vessels and the end of the optic nerve, where it enters the sclorotic, which is scarcely a half line in diameter, appear very much magnified through the ophthalmoscope. The former can be seen passing in nearly all directions, principally however, upwards and

downwards from the centre of the optic nerve, which appears as a large round well defined disk of a very pale orange color. Some of the most important pathological changes in the retina which can be observed by the ophthalmoscope, are deposits of pigment, exudations of lymph, under and in the retina, detachments of the retina from the choroid, and obliteration of the vessels. Changes in the appearance of the optic nerve also, as regards size, form, and color, may be readily seen. In the choroid, absorption and increased deposition of pigment, extravasation of blood, and some of the products of inflammation can be seen with the ophthalmoscope as plainly as corresponding changes in the iris can be recognized by the naked eye.

I might mention other abnormal conditions, but those to which I have already alluded are sufficient to demonstrate to you how indispensable the ophthalmoscope is in forming an accurate diagnosis in diseases of the interior structures of the eye.

I should not omit to urge upon you care in the use of this instrument where there is photophobia or active inflammation of any of the tissues of the eye. When, however, the patient can bear to look directly at the light of an ordinary lamp held quite near the eye, there can be no danger in using the ophthalmoscope. As you gain experience in the use of the instrument, you will find not only that you can make an examination with greater rapidity, but also with a smaller amount of light. It is always your duty to inform patients that the dilatation of the pupil produced by Belladonna or Atropine, will cause for a few days an indistinctness of vision and a certain degree of photophobia, which may require a common shade over the eyes and perfect rest.

Nearly all the recent works upon diseases of the eye contain more or less upon Ophthalmoscopy. If you wish to comprehend the whole subject you must study the theory and use of the instrument, and also the pathology of the retina and choroid, as given in the Archive for Ophthalmology, in the

works of Arlt, Stellwag, E. Jaeger, and Hogg. The beautiful colored plates of Jaeger and of Liebreich, which I show you here to-day, will give you an excellent idea of abnormal conditions as revealed by the Ophthalmoscope.

INVERSION OF THE UTERUS.

By MORTON M. EATON, M. D., of Peoria, Ill.

Having never had in my own practice but two cases of perfect inversion of the womb, I would not make any remarks on the subject, had I not been invited so to do. One case I successfully treated about six months since, the other has but recently come under my notice, and I have as yet made no effort to effect its reduction. I believe this accident to be of unfrequent occurrence. I recollect some four years and a half since, being called to a lady hastily; the messenger stating that the womb had come down between her legs, when, on examination, I found it to be a case of miscarriage, with a breech presentation.

And statements of the common people asserting that Mrs. So and So's womb came out of her body turned inside out, and went back itself, etc., are to be credited about as much as when they tell of having their eyes "taken out, scraped and replaced by some noted oculist, with great benefit to the sight."

Most physicians are too timid in attempting to act when unlooked for emergencies arise, and are slow to undertake a case of unusual occurrence.

For *this* reason, patients often loose their lives, and VERY FREQUENTLY put themselves to great expense and trouble to be treated by some physician in a distant city, when in very many cases, if the family physician had possessed a little more energy and enterprise, his patient would have recovered as well and saved considerable money and time, and the physician

gained some reputation and experience, and thereby been encouraged to renewed application in the duties of his profession.

Hence I report this case, not to attempt to disprove that it is usually difficult to treat inversion of the uterus successfully, but to encourage the timid, that if they use a little energy, many times their success will far exceed their expectations, and what they had thought difficult would be easily accomplished.

Mrs. S., of W—— st., in this city, called on me at my office, about six months since, stating that she was the mother of three children, the youngest about two months of age; that her confinement had been easy and natural. She was attended by her family physician; nothing unusual occurred; that about a week afterward, she walked about the room, and while doing so a tumor came down between the thighs; that she had tried to press it back, but could not, and she had called to enquire if it should be removed. She could hardly walk from the inconvenience the tumor gave. I examined the tumor and found it to be an inverted uterus, hanging 3½ inches external to the external genitalia, and of the size of my two fists. I informed her of its nature, and proceeded at once to reduce it. I oiled the organ with some Ol. Ricini and my hand as well, and indented the most depending portion with my two front fingers, and finding that I could partially reinvert the womb, I formed my fingers into the form of a cone and making continuous and gentle pressure for several minutes I found I was slowly, but surely reducing the inverted organ, and in about ten minutes had the satisfaction of feeling the fundus of the womb spring from before my fingers with a jerk and of feeling the Os Uteri in situ.

I filled the vagina with sheet cotton and sponge, and applied a perineal bandage, directing her to retain it there till the next day, then to remove it and wash out the vagina with a weak astringent lotion, and re-apply some cotton and the bandage, and repeat this each day. She did so and has had no trouble since. The wash was used about two weeks.

[The following correspondence explains itself.—Ed. Jour.]

Byfurorspeculoproulceroutericumargentenitrate, &c., is the title of an essay which will teach young physicians how to make twelve thousand dollars per year. Mr. Editor, would you publish the same? If so, address

Dr. Cicatrix, P. O., Chicago.

Dear Dr. Cicatrix:

Yours of the —— *ult.* was duly received, but meanwhile—*Tempora mutantur et nos mutamur cum illis*—the Journal has passed into other hands. They permit, however, to reply to yours briefly. The publication of the essay is objected to:

1st. Because in these days of "shoddy" wealth is becoming a vulgarity, and its accumulation by a physician tends to impair the "dignity of the profession."

2nd. Because housebreaking, highway robbery and picking pockets, when successfully practiced, may yield the operator more than $12,000 a year, and hence the womb-burning practice would suffer by contrast.

3rd. Because it is not professional to show how "by indignities men come to dignities."

4th. Because there is danger of personalities, and the *impersonal* editorial "we" which "we" have just sloughed off, cannot abide the *personal;*—Speculo *ad alteram.*

5th. Because the ladder which takes one man to wealth and honor, oftentimes takes another to the pillory of popular contempt, or the richly merited hangman's noose.

6th. Because disclosures of unripe plans, or plans so ripe that they verge upon rottenness, of necessity, spoil the whole play, as the squeaking voice of "Bottom, the Weaver," dissipated the alarm of the audience when the leonine illusion waddled down to the footlights.

7th. Because carrying sandal-wood to the Chinese, now that everybody has learned the trick of it, is much like carrying coals to Newcastle.

8th. Because the imposture is fast unmasking itself.

9th. Because "we" have fifty other reasons, obvious to the cleanly mind, for not meddling with an emphatically "*dirty*" business, even though netting $12,000 a year. Ex-Ed.

FOREIGN INTELLIGENCE.

TREATMENT OF DROWNING.—The following rules have been just issued by the Royal Humane Society. They are stated to be "the results of the labors of the committee of the Royal Medical and Chirurgical Society of London."

DIRECTIONS FOR RESTORING THE APPARENTLY DEAD.—I. *If from Drowning or other Suffocation or Narcotic Poisoning.*—Send immediately for medical assistance, blankets, and dry clothing; but proceed to treat the patient *instantly*, securing as much fresh air as possible.

The points to be aimed at are: first, and immediately, the restoration of breathing; and, secondly, after breathing is restored, the promotion of warmth and circulation.

The efforts to restore life must be persevered in until the arrival of medical assistance, or until the pulse and breathing have ceased for at least an hour.

TREATMENT TO RESTORE NATURAL BREATHING.—*Rule* 1. *To Maintain a Free Entrance of Air into the Windpipe.*—Cleanse the mouth and nostrils; open the mouth; draw forward the patient's tongue, and keep it forward; an elastic band over the tongue and under the chin will answer this purpose. Remove all tight clothing from about the neck and chest.

Rule 2. *To Adjust the Patient's Position.*—Place the patient on his back on a flat surface, inclined a little from the feet upwards; raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blade.

Rule 3. *To Imitate the Movements of Breathing.*—Grasp the patient's arms just above the elbows, and draw the arms gently and steadily upwards, until they meet above the head (this is for the purpose of drawing air into the lungs); and keep the arms in that position for two seconds. Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest (this is with the object of pressing air out of the lungs. Pressure on the breast bone will aid this.)

Repeat these measures alternately, deliberately, and perseveringly, fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to induce circulation and warmth (as below).

Should a warm bath be procurable, the body may be placed in it up to the neck, continuing to imitate the movements of breathing. Raise the body in twenty seconds in a sitting position, and dash cold water against the chest and face, and pass ammonia under the nose. The patient should not be kept in the warm bath longer than five or six minutes.

Rule 4. *To Excite Inspiration.*—During the employment of the above method, excite the nostrils with snuff or smelling salts, or tickle the throat with a feather. Rub the chest and face briskly, and dash cold and hot water alternately on them.

The above directions are chiefly Dr. H. R. Silvester's method of restoring the apparently dead or drowned, and have been approved by the Royal Medical and Chirurgical Society.

TREATMENT AFTER NATURAL BREATHING HAS BEEN RESTORED. —*Rule* 5. *To Induce Circulation and Warmth.*—Wrap the patient in dry blankets, and commence rubbing the limbs upwards, firmly and energetically. The friction must be continued under the blankets or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles or bladders of hot water, heated bricks, etc., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet. Warm clothing may generally be obtained from bystanders.

On the restoration of life, when the power of swallowing has returned, a teaspoonful of warm water, small quantities of wine, warm brandy and water, or coffee, should be given. The patient should be kept in bed, and a disposition to sleep encouraged. During reaction large mustard plasters to the chest and below the shoulders will greatly relieve the distressed breathing.

II. *If from Intense Cold.*—Rub the body with snow, ice, or cold water. Restore warmth by slow degrees. In these accidents it is highly dangerous to apply heat too early.

III. *If from Intoxication.*—Lay the individual on a bed with his head raised. The patient should be induced to vomit. Stimulants should be avoided.

III. *If from Apoplexy or Sunstroke.*—Cold should be applied to the head, which should be kept well raised. Tight clothing should be removed from the neck and chest. Stimulants should be avoided.

Appearances which Generally Indicate Death.—There is no breathing or heart's action; the eyelids are generally half closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue appearing between the teeth, and the mouth and nostrils are covered with a frothy mucus. Coldness and pallor of surface increases.—*Brit. Med. Journ.*, Sept. 12, 1863.—*Medical News.*

SELECTED.

ON THE PRESENCE OF AIR IN THE VEINS AS A CAUSE OF DEATH.

By JAS. SUMNER GREENE, M. D.,
Of Dorchester, Mass.

Our attention was recently called to this subject under circumstances which led us to consult authorities for the purpose of ascertaining the supposed frequency of the accident, the conditions under which it may occur, the signs and symptoms attending it, and the nature and amount of evidence required in a given case of death to prove that it resulted from this cause.

These inquiries satisfied us: 1st, That medical gentlemen generally entertain but vague ideas on the subject; 2d, That there is plenty of evidence on record of the occurrence of the accident often enough, under various circumstances, to make it requisite that every practitioner of medicine and surgery should be sufficiently aware of the character of the danger to be able to take ordinary precautions for its prevention, to recognize it when it occurs, and to act promptly and understandingly for its relief; and, 3d, That the investigations heretofore made, while they throw much light on the subject, are far from being complete and satisfactory; that the occurrence of the accident is at least possible under circumstances which have never yet been discussed in this light; and that the interests of science and humanity require, further, more careful and systematic experiments and observation to settle the questions in dispute and clear up the points of obscurity.

Convinced of these things, our object in this paper will be, after some observations illustrative of the first mentioned point, to present as concise a view as possible of all the facts which we have obtained, indicating their chief sources. But while showing what is known, we hope at the same time to throw some new light on the subject, and to indicate what ought to be further elucidated; thus furnishing an index for future reference, and a starting point for new investigations.

There are several reasons why the subject is not better understood among us. In the first place, in its practical bearings,

it is a comparatively recent one. Sufficient care has not always been taken, in making experiments, to guard against sources of fallacy, and opposite and contradictory theories have been proposed to account for the phenomena noticed. Moreover, many of the reports of accidental death referred to this cause have been meagre and unsatisfactory; while from the nature of the symptoms—they being such as may occur under similar circumstances, but from other causes than the one in question—there is room for doubt as to the agency; and against a majority of the cases on record, objections on one or the other of these grounds might be raised with considerable plausibility. For these reasons the subject has not yet fairly taken rank among the unquestioned facts of medical science, and is very unsatisfactorily treated by our latest standard authorities on surgery, obstetrics, pathology, and medical jurisprudence.

For example, none of the works on morbid anatomy which we have consulted make any allusion to the subject, except that of Jones and Sieveking (p. 364,) and their remarks are comprised in a single paragraph. Of the works on medical jurisprudence in common use, only that of Taylor (p. 271) mentions the subject; while he refers to the accident only as connected with wounds about the neck, and makes statements as to its nature and causes which reveal very imperfect knowledge of the matter. Its surgical aspect is that best understood, yet Druitt dismisses it in twelve lines (p. 584); while Erichsen, who alone gives it due prominence, treats it as he has elsewhere, ably but somewhat controversially (p. 140), as do many of the French surgical authorities. Finally, Churchill's is the only system of obstetrics which makes any allusion to it whatever (p. 428). His remarks are just and valuable, but refer only to the occurrence of the accident after delivery, leaving other circumstances of not less importance unremarked. And yet, as will appear hereafter, the subject has important practical bearings upon each of these branches.

We will first consider the accident as it occurs during surgical operations, to which class a majority of the cases now known belong, and for convenience we shall include certain suicidal cases in the same category.

The first well authenticated instance occurred in the year 1818, in the hands of M. Beauchêne, at the Hôpital St. Antoine (Ollivier, *Dict. de Méd.*, art. "Air"). Within a few years thereafter similar cases were reported by MM. Dupuytren, Castara, Delpech, Roux, and Ulrich (Velpeau, *Leçons Clinicales*, vol. i. p. 451, et seq., Amussat, *Recherches sur*

l'introduction accidentelle de l'air dans les veines, and Ollivier, *loc. cit.*,) all ending fatally, and verified by post-mortem examination. Numerous other cases were made known, in which the symptoms bore close analogy to those before named, but which ended in recovery. Prominent among these are cases by MM. Roux, Clémot, Goulard, Mirault, Rigaud, Delaporte, Malgaigne, and Amussat (*Id.*). In this country a case was reported by Dr. Valentine Mott (*Am. Journ. Med. Sci.*, Nov. 1828, p. 107), one by Dr. Mussey (*Id.*, Feb., 1838, p. 391), and three by Dr. John C. Warren ("On Tumours," 1839, and *American Cyclopædia of Pract. Med. and Surg.*, vol. i. p. 263). Two of Dr. Warren's cases were well marked, and though recovery followed in one of them, and in the other no autopsy was obtained, yet no doubt as to their nature existed in the minds of the surgeons who witnessed them. In 1838, M. Velpeau took up the subject in his *Cliniques* (*op. cit.*,) giving a synopsis and brief analysis of 31 cases, including those of Drs. Warren and Mott, and one by himself. The following year M. Amussat's work appeared (*op. cit.*,) in which the details of thirty-six cases occurring in human beings were given. In 1843, Professor Wattman, of Vienna, published a monograph on the subject, in which he reported four cases witnessed by himself. Not having seen his paper, we derive our knowledge of it from able reviews by Dr. John Reid (*Physiological Researches*, p. 539), by a writer in the *Am. Journ. Med. Sci.*, vol. ix. p. 170, and by one in the *Br. and For. Med. Rev.*, vol. xxiii. p. 443. The last named writer collected and arranged in a tabular form 54 cases, more or less authentic and complete in detail, including all those of MM. Velpeau and Amussat, except four very doubtful ones of the latter, which occurred before the possibility of the spontaneous entrance of air into the veins was recognized. Besides these we find cases reported by Dr. March, of Albany, (Cooper's *Surg. Dict.*, 1838), by Dr. Marcacci (*Revue Médicale*, 1847, p. 599), by Prof. Portal, of Palermo (*Id.*, 1839, p. 98), by M. Riberi, of Turin (*Gazette Medicale*, 1843, p. 204), by M. Schmid (*Id.*, 1851, p. 561), by M. Girbal (*Id.*, 1853, p. 46), by Dr. R. H. Coolidge, U. S. A. (*Philadelphia Medical Examiner*, 1849), by Dr. Willis, of Barnes, England (*London Med. Gaz.*, xli. p. 608), by Mr. G. F. Lane (*Id.*, xlv. p. 926), and by Mr. Ward and Mr. Hutchinson, each a case (*Medical Times and Gazette*, Feb. 1856). That reported by Dr. Coolidge was a case of suicide. Finally, and while this paper is undergoing revision for the printer, we are apprised of ano-

ther accident of a similar nature occuring under the hands of Dr. Henry G. Clark, of Boston, Surgeon at the Mass. General Hospital.* It is very possible that other cases have been reported, but these are all that have met our observation.† Of these 67 cases, much the larger portion occurred during the removal of tumors of the neck, breast, and axilla; two, those of B. Cooper and Delpech, were in amputations at the shoulder-joint; one, that of Mussey, was during amputation of the scapula and clavicle; two, those of Rigaud and Clémot, were while tying the subclavian artery; three were during venesection at the external jugular; three during venesection at the median vein; and one, that of Willis, was during the insertion of a seton needle in the neck. Among the veins wounded were the external jugular in 13 cases, including the three above named; the internal jugular in 10 cases, the subclavian in the case of Mussey and the axillary in that of Goulard. One, attributed to Dupuytren, is referred to the internal saphena vein; but this, as well as those referred to the median vein, is not entitled to much confidence. In the others the vessel was either not known, or was ascertained to be a branch of one of the above named veins, cut either about the neck, shoulder, axilla, or breast.

What are the characteristic symptoms? During the progress of an operation, when all seems going on well, a peculiar sound is heard at the bottom of the wound, oftenest described as gurgling, hissing, or bubbling. There is frequently a slight issue of venous blood, indicating that a vein is wounded, and often bubbles of air are noticed at the point from whence the sound proceeds, as in the cases of Drs. Warren Mussey, Clark, and others. The patient suddenly turns pale,

* The patient in Dr. Clark's case was undergoing an operation for the removal of a very large glandular tumor, occupying the whole side of the neck, and during the latter part of it, and when traction was made upon the tumor, a sucking sound was heard, and bubbtes were distinctly seen to enter the jugular vein near the clavicle. The vein had been tied above the wound when the operation was begun, and therefore there was no bleeding to obstruct the view of the orifice. Pressure was instantly applied, and the sound ceased. The vein was then tied below the wound, and the operation was completed without any apparent ill effects. These facts were kindly furnished us by Dr. Clark, who will publish a detailed account of the case in the *Transactions of the Boston Society for Medical Improvement.*

† Mr. Taylor refers to a case published in the *Association Journal* (1853, p. 9), but we have not the particulars. Prof. Valentine Mott writes to M. Amussat (see Amussat, *op. cit.*, p. 157) that he has witnessed three fatal cases in this country; but the details he gives do not enable us to decide whether they are identical with any of those included in the above category or not.

utters a cry, such as "I am faint," "I am dying," and becomes insensible; or there may be observed anxiety of countenance, labored respiration, lividity of the lips, dilated pupils, and convulsions. These symptoms may gradually give way and the patient recover, or they may result in death. The state of the pulse is very apt to be overlooked in the confusion incident to such dangerous and unlooked for symptoms; when sought, it is usually feeble and often imperceptible. Sometimes, however, as in the case of Dr. Mott, violent and irregular action of the heart is observed. Again, lividity of the face and stertorous breathing may be prominent symptoms, as in the cases of Dr. Warren. In the cases of Drs. Beauchêne, Mussey, Portal, and Girbal, a cold sweat was seen to break out upon the face. In Dr. Warren's fatal case a vermillion flush was seen upon the previously livid cheeks during the progress of the efforts at restoration, but soon vanished. In the case of Marcacci a violent cough, lasting twenty minutes, was a noticeable symptom. In Bransby Cooper's case there was involuntary ejection of urine and feces. Syncope is often the predominant feature, and the patient may die with scarcely a struggle. A dull, rustling sound was heard in the thorax in one of Wattman's cases, distinct from the hissing noise at the wound; and the same sound is said to have been heard in Beauchêne's case, but we do not find it mentioned in any of the accounts of it which we have consulted.* In the later case, by M. Girbal, auscultation of the heart was practised, and revealed a *bruit de gargouillement*, completely masking the tic-tac. These, however, are the exceptional signs and symptoms; usually their course is much as at first described. A few of the more prominent ones require further notice.

The warning sound at the wound is almost invariable. Thus it was distinctly noticed and described in 48 instances, including one of suicide, and comprising almost all the cases of which we have any details. It has been described as a peculiar sound (*un bruit particulier*) exactly like that which air produces in penetrating by a small opening into the chest of a living animal, a prolonged hissing (*un sifflement prolongé*) analogous to that produced by the return of air into an exhausted receiver (*par la rentrée de l'air dans un recipient où l'on a fait le vide*), a very noisy snuffling (*reniflement très bruyant*), &c., &c., (Ollivier, *op. cit.*). It is sometimes re-

* See Ollivier, Velpeau, and Amussat, *op. cit.*

peated more than once, as in the cases of Castara, Rigaud, and Clémot. It always ceases upon placing the finger upon the spot whence it issues, and is likely to be renewed if the pressure is removed, as occurred in the cases of Beauchêne and Clémot, and in one of Wattman's.

Directly upon this sound usually follow syncope or convulsions, or both. In 25 cases, only the symptoms of syncope were remarked; in 6, convulsions without syncope; while in 7, syncope was succeeded by convulsive spasms. In the remaining cases, either no general symptoms occurred or death was described as immediate, and no particulars given. Tetanic spasm was noticed in the case of Mirault; opisthotonos, in that of Asmus; and distortion of the face, followed by temporary hemiplegia, in that of Mott. In 13 cases, the respiration was noticed to be embarrassed, hurried, or irregular.

A sudden cry or exclamation was heard in 17 cases. "My blood is falling into my heart; I am a dead man," were the words uttered by Beauchêne's patient. In the case described by Mr. Lane, a small opening was made in a tributary of the axillary vein, a noise like the sucking of water and air into a syringe was heard, and the patient exhibited symptoms of syncope, which were followed by convulsions. She recovered, and in describing her sensations afterwards, said that "she felt something bubble under her arm and shoot quite cold across her breast, and just as she went off she got quite cold all over." This symptom is of course wanting when the patient is fully etherized, as in Dr. Clark's case. In M. Girbal's, the patient had inhaled chloroform, but was becoming conscious at the time of the accident, and uttered a "slight, plaintive cry." Nine cases in which the sound was heard were followed by no bad consequences whatever, and 24 recovered after symptoms of more or less severity. Of the fatal cases, 24 died immediately, or within a few minutes after the conclusion of the operation. The patient of Willis lived 7 hours; that of Mirault, 3 hours; that of Clémot, some hours; that of Girbal, 13 hours; one of Roux, 7 days; and one of Wattman's, 28 days. Of the remaining 4 cases, we have no particulars. The patient of Wattman died finally of pneumonia; that of Girbal, with symptoms of asphyxia; but no autopsy was made in either case.

Of the fatal cases, 18 were examined after death. In that of Graafe it was merely reported that no important organ was wounded, and that the heart and great vessels were natural.

It was mere conjecture that placed it in the present catalogue; all that was stated of the circumstances being that syncope and death occurred during the removal of a gland in the axilla. In the case of M. Beauchêne neither air nor blood was found in any of the cavities of the heart; but there were numerous bubbles of air in all the vessels of the brain, in the inferior vena cava, iliac veins, aorta, and crural arteries. Dissection in this case was made eighteen hours after death. In the case of M. Roux, where death was delayed until the seventh day, the cavities of the heart were also found empty, and no air was discovered in the veins, while the aorta and iliac arteries contained air mixed with blood. It is noticeable also that the lungs were œdematous, and the bronchia contained frothy mucus. In the remaining 15 cases air was found in the right cavities of the heart. In 4 cases, besides the two above named, air was found in the arterial system: those, viz., of Dupuytren and Gorré, and the suicidal cases of Pellis and Handyside. In 6 cases the air in the heart is stated to have been mixed with blood; in 2 it is stated that it was not so mixed; while in the remainder the condition in which it existed was not remarked. In 8 cases air was noticed in the venous system; in only 2, those of Willis and Coolidge, was it particularly noticed in the pulmonary artery. In both cases of M. Roux it was stated that no air was found in the vessels of the brain; while in M. Dupuytren's case it was found there. The length of time elapsing before the autopsy, is stated in but six of the cases: in these it was from 18 to 26 hours, with the exception of one, in which it was 52 hours. In the case of Roux a rough analysis of the gas contained in the heart was made, and it was decided to be atmospheric air. In the case of Pellis an analysis was made by M. Bischoff with a similar result. M. Roux also measured such of the air contained in the right ventricle as he could collect, and found 11 centimetres cubes (about two-thirds of a cubic inch).

We have now seen that accidents, all dangerous, and many fatal, do occur under specified circumstances, ushered in by a sound indicating the entrance of air into a vessel, attended by a peculiar class of symptoms, and in which the autopsy, if one is made, uniformly discloses the presence of air in the circulatory system. Let us now see if anything is known corroborative or explanatory of these facts. Here, as in all physiological investigations, we resort to experiments upon animals. We find, however, that experiments bearing upon the subject were made long before the subject itself was known to have any practical importance.

Nearly two centuries ago it is stated that Wepfer killed an immense ox by blowing air into the jugular vein. Similar experiments were afterwards made upon dogs and sheep by Redi, Bohn, Heydius, R. J. Camerarius, Brunner, Harder, Sprœgel, and Valisneri (Morgagni, *De Sed. et Caus. Morb.*, Epis. v.). Dr. Langrish, an English physician of the last century, made similar experiments upon dogs; and Châbert, a French *veterinaire*, upon horses. The chief practical result seems to have been the adoption of this as a convenient mode of killing superannuated horses (Ollivier, *op. cit.*, p. 66). At the beginning of the present century interest was reawakened in the subject by Bichât, who made some new, but as it proved, erroneous statements relative to the amount of air necessary to produce death, believing that a single bubble alone was sufficient (*Récherches Physiol. sur la Vie et la Mort*, art. ii. part ii.). In 1809, Nysten published the results of numerous and careful experiments made by him upon animals with a view to determine the effects produced upon the animal economy, by the presence of atmospheric air and various gases in the circulatory system. At this time nothing was known of the possibility of the spontaneous entrance of air into an opened vein, except a case reported in 1806 by Verrier of its entrance into the jugular vein of a horse when opened in phlebotomy (Velpeau, *op. cit.*). It is true that Redi and Caldesi saw air circulating in the veins of tortoises, Lancisi in hedgehogs, and Morgagni in vipers, trout, and carp, after being wounded; but they inferred that it existed naturally in those animals. It is true also that Méry noticed the appearance of air in the lower vena cava of a dog, after puncturing the vein; but he thought it was developed in the smaller venous branches, and passed forward to fill the vacuum caused by the escape of blood (Morgagni, *op. cit.*, secs. 22–26). Haller, indeed, who witnessed the same phenomena, was convinced that they only appear after a considerable wound of some vessel, and that they are not seen when the veins have been well managed. Nysten himself had observed many times that the veins and right auricles of decapitated men were distended with air; but he made no attempt at its explanation (*Récherches de Physiol. et de Chimie Pathologique*, p. 5). After instances became known of death in the human species attributed to this cause, these experiments and observations became matters of more practical interest. Dr. Wing, of Boston, published the result of experiments made by him upon rabbits and sheep (*Boston Med. & Surg. Journ.*, May

14, 1834). Other experiments are recorded by Magendie (*Leçons sur les Phénomènes Physiques de la Vie*, 1836), and by Dr. John Rose Cormack (*Inaugural Dissertation*, 1837). In 1837 a warm discussion arose in the French Academy of Medicine, consequent upon the account given by M. Amussat of a case occurring under his hands, and where recovery was attributed to the means used by him (*Bulletin de l'Academie*, vol. i. pp. 895 and 905). On this occasion M. Gerdy and others denied the probability of the entrance of air causing death in human beings, chiefly on the ground that the symptoms reported differed from those noticed in animals when air was forcibly injected. The discussion resulted in the appointment of a commission, of which M. Bouillaud was reporter, before which M. Amussat exhibited a series of forty experiments on dogs, horses, and mules, to determine the effects of the spontaneous entrance of air, and the various circumstances which modify those effects (*Id.*, vol. ii. p. 182). Later experiments have also been recorded by Mr. Erichsen (*Edinburgh Med. and Surg. Journ.*, Jan., 1844,) by M. Bernard) *Des Substances Toxiques et Médicamenteuses*, pp. 161–163), and by Prof. Dalton (*Am. Med. Monthly*, June, 1860, p. 507).

Some of these results are in brief, as follows: It was found that the injection of air into the veins of a living animal, whether by means of a syringe, as in the experiments of Nysten, or by insufflation through a tube, as in those of Dr. Cormack, produced symptoms proportioned to the quanty used and the rapidity with which it was injected. When injected little by little, and repeatedly, the result was the expectoration of a transparent frothy liquid, mucus râles, and death sometimes as late as the third day. A still less quantity produced only momentary excitement of the heart's action, followed, after repeating the injection, by an enfeebling of the pulse. Sometimes complete recovery took place after quite violent symptoms. The phenomena produced in the fatal cases were as follows: A *bruit particulier* was heard, coming from the region of the heart, and synchronous with its systole. This was caused by the mixture of air and blood taking place in that organ, and sometimes lasted many minutes. It was compared to the sound produced by beating white of egg and water together (*en battant ensemble du blanc d'œuf et de l'eau.* Nysten, *op. cit.*, p. 16). The animal uttered some cries of suffering after the first injection, the pulse became more frequent, the respiration quickened and panting, the limbs stiffened and sometimes agitated by convulsive movements, the urine and

fecal matters were forcibly expelled, and in proportion as the experiment was prolonged the pulse grew feeble and ceased to be felt, the inspirations became rare and deep, and death soon followed. If a fatal quantity was introduced at a single injection the effects were sudden falling, cries, convulsions, and almost instant death. Dr. Wing noticed in some of his cases that the heart palpitated violently, and then suddenly ceased altogether. We have noticed the same thing in a cat subjected to a like experiment. The heart thumped violently against the walls of the chest several times, ceased suddenly, and again thumped as before. Its action ceased altogether in less than a minute after air entered, with the exception of the right auricle, which continued its contractions for several minutes.

The quantity of air necessary to produce death varied with the different species of animals, and among different individuals of the same species. Some of the earlier experimenters noticed that dogs succumbed sooner than sheep, and Morgagni concluded that it was because the latter were colder blooded animals (*op. cit.*, sec. 22). Nysten estimated that between 40 and 50 centimetres cubes (2.44 to 3.05 cubic inches) for a small dog, and from 100 to 120 centimetres cubes (6.10 to 7.32 cubic inches) for a large dog were required, and much larger quantities for larger animals. Dr. Wing found that a volume equal to f ℥ iij did not kill sheep; the symptoms subsided in about 20 minutes—f ℥ vj produced apparent death in a sheep, and f ʒ iij killed rabbits in a few seconds. According to Mr. Rey, Professor in the Veterinary School at Lyons, two full expirations are required to kill horses, and sometimes a much larger quantity fails to cause death (*Gaz. Hebdomadaire*, 1861, p. 437). He states that he has heard the *bruit de glouglou* in these animals for some hours after bleeding without any accompanying disturbance of the general functions.

The experiments of the French commission, and those of Erichsen, are the only ones recorded in which the air was spontaneously admitted; in these the circumstances were made to resemble, as closely as possible, those under which it accidentally enters the veins in man. The vein opened was the internal jugular in most of the cases; once the subclavian was selected, once the axillary, and once the brachial near the border of the axilla. It was found that air always entered these veins in those parts to which the venous pulse extended, and not beyond that limit unless the orifice was put upon the stretch, or a tube inserted to the part where the venous pulse

existed. The entrance of air was always announced by a lapping sound (*lappement*) in dogs, and a gurgling (*glouglou*) in horses. This was heard at the wound, and was generally synchronous with the inspiration, but sometimes with the diastole of the heart. Auscultation of the heart in dogs revealed a sound described as a mixture of blowing and gurgling (*un mêlange de souffle et de glouglou*) as a churning sound, or as a *bruit de souffle* accompanied by a *bruit humide*. This sound is not mentioned as occuring in horses. During expiration frothy blood often made its escape from the wound. The symptoms were much as when air was injected, but death was more gradual. Anxiety and agitation, great debility, labored respiration, cries, and violent convulsions, with ejection of urine and feces, preceded the fatal termination. Death occurred in from 3 to 36 minutes in healthy dogs. It took place sooner in the vertical position than in the horizontal. The symptoms seemed to be aggravated in this position, probably in part because the escape of blood and froth at the orifice in the vein was prevented. It was found that death took place sooner if the animals were debilitated before the experiments. A few experiments were tried to ascertain the remedial effects of suction and of compression of the chest, but they gave no satisfactory results.

Examination after death constantly showed great distension of the heart with frothy blood, which was also found in the pulmonary artery, and in more or less of the larger veins. In horses, air was also found in the arterial system in all cases.

This was attributed by M. Bouillaud to the larger size of the pulmonary capillaries in those animals than in others, an explanation which may also help to account for the greater quantity of air required to produce fatal effects in them. In dogs, air was found in the arteries and left cavities of the heart only when death was delayed for some days after the experiment. This condition was found in three out of four cases, of the commission, thus delayed; in the fourth the heart and vessels were found collapsed and flabby, and containing no air, as was the case in all the similar experiments of Nysten. No distinction can be drawn between the post-mortem appearances in the cases where the admission of air was spontaneous and those where it was injected. Erichsen states that in many experiments by him the right cavities of the heart, though they contained bloody froth, were not distended by it (*op. cit.*, p. 8); and he draws an argument from this in favor of his theory, that distension of the heart has no

thing to do with the production of death. However true the theory may be, the fact is entirely at variance with those remarked by other experimenters, as well as with the condition of the organ noticed in man after death from the same cause.

The brief *résumé* which we have now given of the results of experiment upon animals, imperfect though the experiments were, sufficiently establishes, by comparison with the accidents in man which we have considered, that the two classes are of the same nature, and due to the same cause.

Let us now consider another class of conditions, less understood than the preceding, under which air may enter the circulation and produce its characteristic effects, viz., through the veins of the uterus.

A fact illustrative of this possibility was observed by Legallois (*Jour. Hebd. de Méd.*, 1829, vol. iii. p. 183.) A female rabbit had had two successive inversions of the uterus after parturition, and he had placed himself to watch her, when all at once she struggled (*se débattre*) convulsively and died in less than three minutes. The right auricle was full of bubbles of air; the pulmonary artery, and the two anterior venæ cavæ contained them only in the portions near the heart, while the posterior cava was filled with them as far as the place where it received the uterine veins, and no farther. These veins themselves were also filled with air. M. Legallois had seen the same thing in two other cases. His son, who relates this experience, asks if some of the cases of sudden death in women recently delivered, and where the autopsy has failed to disclose any adequate cause for the catastrophe, might not find explanation in this way; and M. Ollivier repeats the question, and pronounces it worthy of investigation (*op. cit.*). Some years later M. Nélaton observed that the liquid injected into the uterus of a woman who had died of erysipelas of the face, passed into and distended one of the veins of the large ligaments, driving before it bubbles of air (*Gazette Médicale*, 1840, p. 568).

In 1844, Prof. Simpson furnished Dr. John Reid with the following details, which first gave him the idea that death might occur from the introduction of air into the uterine veins. The patient had been delivered of twins; post-partum hemorrhage, with alternate contractions and relaxations of the uterus supervened, and she seemed to rally very imperfectly from the effects of the flooding. "I saw her," he says, "an hour or two afterwards. She had then a very weak and rapid, almost imperceptible pulse, an extremely anxious countenance,

and here and there was an evanescent scarlatinoid rash over the surface of the body." After death the uterine and hypogastric veins, and lower vena cava, as well as the larger veins of the extremities, were found full of frothy blood. He had since seen two other cases in which the same symptoms were present, but no autopsy was made.

Dr. John Rose Cormack read an essay on this branch of the subject before the Western Med. Society in 1850, but we have not access to his paper. It contained reports of seven cases, viz: that of Professor Simpson given above, one related by M. Bessems, particulars of which we shall give hereafter from the original source; and the five following, the few details of which we derive from the paper of Mr. May.

1st. A case by M. Lionet, of Corbeil: A lady, aged 27 years, had a natural labor with no hemorrhage. She soon became faint, breathed with difficulty, and expired five hours after delivery. Air was found in the heart and cerebral vessels. 2d. A case by Dr. Wintrich: Convulsive movements and suffocation followed expulsion of infant and partial separation of placenta. Air was found in the venous system. The other three cases were observed by Dr. Lever, of Guy's Hospital. In all of them there was hemorrhage after delivery, and death in a few hours. Air was found in the uterine and other veins. The following are the important features of a case reported by Mr. Berry (*L. and E. Monthly Jour. of Med. Sci.*, 1851, p. 189, from *Prov. Med. & Surg. Jour.*). A lady, aged 22 years, was safely delivered of her first child about 7 o'clock P. M. The labor was natural, and there was no hemorrhage. She expressed herself as feeling comfortable up to 11 o'clock. At 1 o'clock her husband became alarmed by her difficult breathing and sent for the physician, but before he arrived, at 2 o'clock, she had expired. A post-mortem examination was made on the morning of the second day. The uterus was midway between the pelvis and umbilicus. The peritoneum covering it was healthy, but pale. The vessels where the placenta had been attached were patulous. The vagina contained, at its superior part, a moderately sized clot of blood. The heart was the size of a male heart, and apparently distended. Upon making an incision into it a gush of air escaped and the organ became flaccid. No blood was found in any of its cavities. The kidneys presented a granular appearance, and the lungs contained scattered tubercles in their upper lobes. The other organs were healthy, and there were no signs of decomposition.

The three following cases were reported by Mr. May in the *Br. Med. Journ.* (*Am. Journ. Med. Sci.*, Oct. 1857.) The first occurred to Mr. Taylor, of Wargrave. Labor was proceeding naturally when, as no urine had passed, he attempted to introduce a catheter. At this moment a severe pain occurred, accompanied by the escape of about ¾ pt. of liquor amnii. The patient exclaimed, "Oh! how faint I feel!" was convulsed a moment and expired. Autopsy 48 hours after death. Uterus above umbilicus. Placenta upon anterior surface, not separated. Scarcely any blood in uterus, lower vena cava, or heart. Right auricle thin and distended with air.

The second case was furnished by Mr. Smith, of White Church. The patient was naturally delivered, and comfortable. Severe after-pain occurred, and soon great oppression was felt about the chest, with sinking, exhaustion, and restlessness, speedily followed by death. Autopsy the same evening. Body not yet cold. The uterus was large, and contained a piece of the placenta adhering; it contained a coagulum, but not large enough to have produced death. The right side of the heart was distended. On opening it a puff of air escaped and the organ collapsed. The valves were healthy. A small clot was contained in the left ventricle.

The third case was seen by Mr. May himself. The labor had been natural and the patient had resumed her duties, when, on the eighth day after delivery, she was taken suddenly ill and expired. Autopsy the following day. No evidence of decomposition. Frothy blood was seen on slicing the liver. Air in inferior cava and venæ portæ. The right heart was distended with frothy blood. Uterus the size usual on the eighth day.

Professor Oppolzer relates a case of uterine carcinoma (*Br. and For. Med.-Chirurg. Rev.*, vol. xxx., 1862), in the course of which air entered the circulation. The attack began with acute pains in the hypogastrium, extending over right thorax. In about 24 hours the skin of the whole right side was intensely red, and covered with vesicles filled with reddish serum. The redness proved to be due to hemorrhage. A subcutaneous emphysema was observed in the epigastric region. Collapse set in, and death took place in a few hours. The details of the autopsy, which was made 33 hours after death, was very minute. The integments, as well as the spleen, crepitated on pressure. The viscera were pale and flaccid. Air or frothy blood was found in the right cavities of the heart, beneath the visceral layer of the pericardium, in the vessels of the

liver and kidneys, the internal spermatic vein, and vena cava. The latter gave a tympanitic resonance on percussion. The disease proved to be villous cancer.

These eleven cases are all that we have been able to collect in which death was attributed to the spontaneous entrance of air through the uterine veins. Some of these are too meagre in detail to admit of an opinion being formed upon them; while in one or two it seems possible that the gas found in the vessels was developed there by morbid changes, but in other cases the evidence is strong in favor of the cause assigned, and when taken as a whole we think very little doubt can be entertained as to the nature of the accident. The chief obstacle to full belielf, in many cases, is the failure of the observers to state the precise condition of the body, as to post-mortem changes, and what precautions, if any, were taken to prevent the admission of air during the autopsy. But when we remember that the gentlemen who reported them were generally men of experience and eminent in the profession, and that the presence of air was suspected beforehand, we cannot doubt that, at least, ordinary precautions were taken against fallacy. It will be asked whether air may not be oftener present in the heart after death than is generally supposed, but only noticed when specially sought for. To this it may be answered that Dr. Cless, of Stuttguard, examined 1200 bodies after death from various diseases, with especial reference to this possibility, and only found air in fourteen cases, and those where the previous symptoms had led to the suspicion that air was present. (*Trans. of Path. Soc. of London*, vol. ix. p. 154.)

We now come to another class of cases, where the addition of another link in the chain of evidence renders it nearly or quite conclusive as to the cause of death. Among these we place the case of M. Bessems. It was one of adherent placenta in a hospital patient. Uterine injections of chlorinated water were being used, and previous to each injection small portions of the placenta had been torn away; the patient was weakened by loss of blood. It is stated that special care was taken to exclude bubbles of air from the syringe. On injecting the fluid for the third time, the woman immediately sprang up in bed (*se projette sur son séant*) and stretched out her arms, crying that she was suffocating. The head then fell backwards, the face grew pale, the eyes rolled upwards spasmodically (*se convulsent en haut*), and the look became fixed. It was thought to be an hysterical fit, but the respiration became less and less, the pulse was no longer perceptible, and,

in spite of all the ordinary stimuli, death took place within three minutes after the injection. Autopsy twenty-four hours after death. No trace of putrefaction; the uterus somewhat larger than the fist; no sign of inflammation in its walls; its cavity still contained a portion of placenta of the size of a small hen's egg; the inferior cava was distended, and contained many large bubbles of gas distinctly visible through its walls; the right cavities of the heart were distended and elastic. After tying the vessels, the organ was opened under water, and a large quantity of gas mingled with blood escaped. The left cavities also contained some bubbles. In this case we cannot doubt that the gas found in the heart and vessels made its entrance at the time of the injection, and produced the fatal result. Whether the gas was the result of decomposition of the placenta, or was atmospheric air admitted from without, the effects would be the same, as proved by the experience of Nysten (*op. cit.*); but if it had been the former, fewer traces of it would probably have been discovered after death, on account of the great solubility of those gases in the blood.

Prof. Simpson relates an instance stated to him by an Irish practitioner. This gentleman was blowing common air into the os uteri for the purpose of procuring uterine contractions, when his patient suddenly fell back and expired, no bad symptoms having been previously observed. There was only very slight hemorrhage. We give this on the authority of Dr. A. D. Sinclair, of Boston.

Prof. Dalton relates another case (*Am. Med. Monthly*, June, 1860, p. 519), first reported by Dr. John Swinburne, of Albany. A female abortionist attempted to procure delivery at the fifth month by rupturing the membranes with a gutta-percha catheter, and the patient fell back, as the woman supposed, in a fainting fit; a physician was called, but before he arrived the patient was dead. Autopsy, in the month of March, fourteen hours after death. Air was found in the sinuses of the uterus, the jugular veins, and even in the superficial veins of the body. The right cavities of the heart were distended with a spumous mixture of blood and air. The uterus contained a healthy fœtus; the membranes were unbroken, but were separated from the uterine walls on the right side, together with a portion of the placenta, and there was a perforation at this spot leading directly in the uterine sinuses. Prof. Dalton coincides with Dr. S. in the opinion that air was forcibly blown in, through the catheter, with the intention of

producing separation of the membranes. If this was the case, the way in which it entered the veins is sufficiently obvious.

The last case we have to record is the one which led us to examine the subject. It occurred under the observation of Dr. Homer O. Hitchcock, of Kalamazoo, Mich., and though not yet published, we are permitted by him to make use of the facts. An abortionist attempted to procure delivery of a woman four or five months pregnant, by perforating the membranes. He used a tube fourteen or fifteen inches long and about one-quarter inch diameter. Presently the husband, in the next room, heard his wife "screech," and a moment after the "doctor" opened the door and called for water, saying that the woman had fainted. The husband found her purple in the face, with the muscles of the chest and arms in contraction. Restoratives were tried to no purpose; she was dead in less than ten minutes. The man told the husband that the instrument did not hurt her until just as he was about to draw it out, when he blew in it, and she instantly struck at him with her hands, screamed out, and became blue in the face.

Viewed in connection with the facts and cases already considered, it would seem as if there could be no possible doubt as to the nature of the accident, even without the corroborative proof of a post-mortem examination; yet the physicians who conducted the autopsy had no suspicion of the presence of air in the vessels, and only examined the abdominal cavity and the uterus; while, if we mistake not, eminent surgical and pathological authority in this vicinity, on hearing the facts stated, expressed skepticism as to the agency of air in producing the result. Yet no less authority than Prof. Syme testified at the inquest in Dr. Willis's case, where death followed the puncture of a seton-needle, that an autopsy was not necessary to render certain the manner in which death was produced, and that it was only demanded by the interests of science. These gentlemen could not have been acquainted with the literature of the subject when expressing such an opinion. It only serves to illustrate the singular obscurity which veils the subject in this country, and the need there is that attention should be called towards it.

(*Concluded in next number.*)

EDITORIAL AND MISCELLANEOUS.

The Sanitary Commission.—There is nothing more honorable to the age and the country in which we live than the voluntary associations for the relief of our soldiers in the field. The deaths from disease in the best provided armies in war have been to those from wounds as 9 to 1. (MacLeod's Surgical Notes of the Crimean War). If much of this mortality is caused by unavoidable evils, much is also due to unwholesome food, insufficient housing and clothing, discouragement and intemperance. In a mere pecuniary sense, it would be better for any government to take good care of its soldiers. "To preserve the soldiers," says Baudins, a most eminent military surgeon, "is the first interest of a nation which carries on a distant war, it is also the best security for final success."

This necessity our own government was, like others, incapable of providing for at the beginning of the war, but it was felt instinctively by the people whose charity found action through the various "Sanitary Commissions," and according to official statements, supplies to the value of about ten millions of dollars have passed through their hands. As this was in addition to all the government could do, it stands forth as a charity unrivalled in any age or nation. The British people made the same efforts for their soldiers in the Crimea to the extent of perhaps one-tenth the above amount, efforts which says a French surgeon, "show the real greatness of the nation.

It is impossible to estimate the benefits conferred in preserving life, soothing suffering, administering consolation to the sick and wounded, in correcting abuses in the hospitals and making medical officers more vigilant and attentive; in restoring our armies to the state of comparative health and

vigor and efficiency which they now enjoy. It was charity following in the footsteps of relief to bind up his wounds.

Recently, when the enthusiasm seemed diminished and supplies were needed, it was proposed to hold a Fair of the Northwest at Chicago. Many thought it would be a failure, but the results far exceeded what could have been obtained at any former time. The Fair is thus described by the *Sanitary Commission Bulletin:*

The contributions to the Fair, to be sold for the benefit of our sick and wounded soldiers, were large, were munificent, but it was this tone of deep-seated earnestness which was largest. It was not merely what men and women said and did, but the *way* the thing was done, which carried with it this impression of wholesale generosity of spirit. Delicately wrought articles, such as usually adorn the tables of Fairs, the work of ladies' hands, were not wanting; but then the farmers from miles and miles around kept coming in with their wagons by twenties, and fifties, and hundreds, loaded down with their bulky farm produce; others came leading horses, or driving before them cows, or oxen, or mules, which they contributed instead of money, of which, perhaps, they had none; others brought live poultry which had been fed for months by the poor man's door; they brought this because they must bring something, and this was all they had. Some wagons were loaded from rich dairies, with butter and cheese by the ton. Then came great loads of hay from some distant farm, followed by others just as large from farms farther off. The mechanics brought their machines, and gave them in, one after another;—mowing machines, reapers, threshing machines, planters, pumps, fanning-mills—until a new building, a great storehouse, had to be erected to receive them; and here were ploughs, and stoves, and furnaces, and mill-stones, and nails by the hundred kegs, and wagons, and carriage springs,—and axes, and plate glass, and huge plates of wrought iron, (one the largest that was ever rolled from any rolling-mill in the world,) block tin and enameled leather, hides, boxes of stationery, and cases of boots, cologne by the barrel, native wine in casks, purified coal-oil by the thousand gallons—a mountain howitzer, a steel breech-loading cannon, a steam-engine made by the working-men in one of the manufactories of engines in Chicago—and on it this inscription—"This engine is donated by the workmen of the Eagle Works

Manufacturing Co., every man contributing something—not one Copperhead in the whole institution." There, too, were other machines which had been built by employees of various establishments, who had worked "after hours" to construct something for the Soldiers' Fair. Such, with a thousand other gifts, great and small, filled this new storehouse, where liberal purchasers were found waiting. Then, again, the carpenters, and joiners, who, in the press of work upon unfinished buildings, could not leave their hammer and saw to go to the Fair, joined together by tens and twenties, and set apart a day of which they would give their earnings to the soldiers. In like manner, different firms would advertise a sale for the benefit of the Fair. Thus,

"To the Loyal Stone-Masons of Chicago. We propose to donate to the Northwestern Sanitary Fair the entire proceeds of the sale of one canal boat load (20 tons) of our first-class rubble stone. Bids for the same will be received at our office till Friday next." Signed ———, &c.

Then loaded wagons came in long processions, toiling into the city, from far-off country places, bearing marks of frontier service, and the horses or mules, together with the drivers themselves, most of them told of wear. Many of them were sun-burnt men, with hard hands and rigid features; and a careless observer would have said that there was surely nothing in those wagons, as they passed, to awaken any sentiment. Yet something there was about it all which brought tears to the eyes of hundreds as the old farmers with their heavy loads toiled by.

Surgeon General Hammond has co-operated as have most of the volunteer surgeons and some of the regular army surgeons in this work, and the medical profession in general throughout the country has identified itself with it. The subject is not foreign to a medical journal. The spirit thus awakened may, when the war is ended, be turned to the relief of that class of sick poor, future soldiers and citizens, whose wants in this city and throughout the country are most inadequately provided for and who stand almost as much as the soldiers in need of medical and surgical care when disabled. To make known these wants, to aid in forming associations for their relief, in building hospitals, is the duty and legitimate office of the physician, for which he can in no better

way prepare himself than by active aid to the "Sanitary Commission," and by which he can most effectually add to the usefulness and honor of the profession.

The Surgeon General.—During the progress of the present sanguinary struggle, no department of our vast organization to crush the rebellion has been regarded by an intelligent and thoughtful people, with more anxiety than the medical; and its progress and augmenting efficiency have been watched by the medical profession throughout the country with a nervous interest. The necessity to the army of a well organized medical staff was fully appreciated long ago. Says Xenophon, "The great Cyrus never failed to take a certain number of excellent physicians along with him in the army, rewarding them very liberally, and treating them with particular regard. And in this he only followed a custom that had been anciently established by their generals." From the earliest times medical men have not only rendered invaluable service to the army as physicians, but they have frequently signalized themselves on the field as military leaders. "Podalirius and Machaon both commanded troops at the siege of Troy. They were no less excellent physicians than brave officers, and rendered as much service to the Greeks by their skill in medicine as they did by their courage and conduct in their military capacity." And a similar statement may be made of the representatives of the medical profession in every great military campaign from that time down to our own great conflict for the preservation of the country. And yet there is a feeling prevalent, not confined to the medical profession, that the medical element in our present war has not been fully appreciated, or treated with proper consideration. A large share of the malignity against the profession having its origin with those who would favor quackery, in some one or other of its many forms, has been directed against the head of the Medical

Department of the Army, Surgeon General Hammond. Malfeasance, with other charges, has been urged against that officer. Of the justness of this charge we know nothing, and express no opinion, and can only hope that the Surgeon General, in compliance with his own request for an investigation, may have an impartial trial.

We consider the question of his competency for the position as already answered,

1st. By what he has accomplished in rendering the medical organization efficient, the following brief extract from a London cotemporary expresses our views, and shows how a disinterested party regards him:

"Appointed by the President, in spite of the old routine custom, over the heads of many seniors, he came to his task full of vigor, in the prime of life, and capable of great physical endurance. With a bold hand he surrounded himself with trustworthy subordinates, displacing many whom he did not think equal to the crisis, and proceeded energetically with his work. Large armies had to be provided for, a system of military hospitals to be organized, the examining boards to be reconstructed, and an army medical school and museum to be founded. Well, in these vast and useful works he seems to have succeeded beyond all expectation, and the confidence of the public in the new system of medical organization has been warmly expressed, and yet by the last accounts we learn that he has been suspended from his office, and ordered to a distant service, a commission having been appointed to inquire into the condition and management of his office."

2d. By the fact that the department has been well supplied with medical stores and appliances, in every emergency, so far as human prescience could anticipate the demand.

3d. By the fact that our army, though raised in the higher latitudes and has been on duty in the malarious districts of the South, has not suffered from the prevalence of fatal epidemics, such as have decimated the armies of all nations, under similar circumstances. And we cheerfully append the Address of the U. S. Sanitary Commission to the President, as the testimony of men whose opinions should have weight:

U. S. SANITARY COMMISSION.

To his Excellency the President of the United States:

SIR:—The United States Sanitary Commission authorized by the Government to act as a Commission of inquiry and Advice in respect to the sanitary interests of the national forces, have been for more than two years and a half close and careful students of the medical and hygienic affairs of the army. They ought to be, they are thought by the people of the United States to be, they claim to be, better acquainted with the working of the Medical Department, whose deficiencies, mistakes, and necessities, it is their solemn duty to discover and obviate, than any other responsible body of witnesses. Trusting in their discretion, zeal, and works, the people of the loyal States have made them their almoners, to the extent of seven millions of dollars' worth of sanitary stores, and a million of dollars in money. The disbursement of this immense charity has brought our agents into close and continual contact with the Medical Department, of whose steady and rapid improvement from the imperfect state in which we found it, to its present degree of surprising and gratifying efficiency, we are able to lend a most indisputable testimony. We attribute this immense improvement to the fact that for two years the Medical Department has been directed by Dr. W. A. HAMMOND, Surgeon General, a man known to all impartial and competent judges, as thoroughly scientific, highly endorsed, large-minded, and an energetic and controlling administrator. He was selected for his office, solely for fitness, and in our calm and deliberate judgment, his administration has more than justified all the high hope and expectations of those who recommended him for the place.

We hear from sources that do not permit us to doubt the fact, that cautious but systematic efforts are now making to remove Surgeon General HAMMOND from office. In the name of some millions of constituents, in the name of the homes of this country, whose solicitude, liberality, and watchfulness, we represent, we respectfully and conscientiously protest against the secret tribunal, and the indirect methods, by which the good fame of the Surgeon General has been already seriously, and we believe unjustly, aspersed. We protest, in our character of experts, a body whose business it has been made to inquire and advise on this very subject, that the removal of Dr. HAMMOND would be as serious a blow, at the lives, comfort, and efficiency of the army, as the enemy itself could inflict;

that the science of the country, the humanity of its homes, and the army itself, would resent it as a cruel wrong and an alarming error; and we feel ourselves bound, in the interests of the soldiers in the field, and of those about to enter the service of the country, in the defence of our own principles and convictions, and in the name of the science, the charity, and the fair-mindedness of the nation, to beg that no further steps in this direction may be taken, without a full and fair trial of Surgeon General HAMMOND upon the charges alleged to have been secretly made against him.

Dec. 29, 1863.

Signed { H. W. BELLOWS, WM. H. VAN BUREN, WOLCOTT GIBBS, GEO. T. STRONG, C. R. AGNEW,

Standing Committee U. S. Sanitary Commission.

Pharmacy in South America.—The Pharmaceutical Association of Buenos Ayres has lately received the official recognition of the Argentine Government. It has also petitioned the Government for the formation of a School of Pharmacy at Buenos Ayres. The Society pledges itself to maintain an official journal of the Society. The journal is in the Spanish language and is published quarterly.

Physiological Action of Baryta and Oxalic Acid.—Dr. Onsum has communicated his researches in the toxical action of the Salts of Baryta and those of Oxalic Acid in *Virchow's Archiv.*, (vol. 28). From these he follows that they form the insoluble precipitates of Sulphate of Baryta and Oxalate of Lime, when they come in contact in the blood with a sulphate or a salt of lime, and that these precipitates obstruct the branches of the pulmonary arteries. Chemical analysis has, in all instances, proved their presence in the lungs, while they could not be discovered either in the brain, the spinal marrow, the kidneys, or the muscles.—*Druggists' Circular.*

Ligature of the Subclavian.—Dr. Armsby, of Albany, in November, ligated the subclavian artery. The ligature came away on the twenty-ninth day—on the FORTIETH day the patient was able to attend to business.

Inversion of the Uterus.—The reduction of an inverted uterus has been considered always a difficult operation. The history and result, given in the interesting article of Dr. Eaton, in the present number, leads to a different conclusion. We congratulate the Doctor on the success of his enterprise and tact.

Commencement in Rush Medical College.—The commencement exercises of the twenty-first annual course of lectures in Rush Medical College were held on Wednesday evening, the 27th ult., on which occasion seventy-nine gentlemen received the degree of Doctor of Medicine. Prof. Brainard, President of the Faculty, conferred the degrees, presenting each graduate with his diploma—after which he delivered a most instructive and pleasing valedictory address. We hope to have the pleasure of presenting it to the readers of the *Journal*, feeling sure its perusal would gratify the friends of the author, and of the College.

The course of lectures thus brought to so auspicious a close, has been more gratifying than any since the organization of the institution. In literary attainments and gentlemanly deportment, as well as in numbers, the class has been one of which the Faculty of any medical college might well be proud. The prospects of the College are brighter than its most sanguine friends, at the re-organization of the Faculty five years since, had dared to hope. And they would have been considered visionary if they had predicted that the twenty-first course would be attended by more than two hundred and fifty students, but this is the fact. As proof of the completeness of the course, and thoroughness of teaching,

we may refer to the uniform success, and honorable position of the alumni, who may be found occupying responsible places in every section of the country and in every division of the army. We subjoin the list of the graduating class:

NAMES.	SUBJECT OF THESIS.
Adkins Frank B.	The Human Skeleton.
Akely Harrison.	Treatment of Typhoid Fever.
Allen Orlenzer.	Digestion.
Avery Samuel J.	Version.
Babcock Lyman F.	Æration of the Blood.
Babcock Charles M.	Colic.
Bradbury William T.	Cholera Infantum.
Bibb George R.	Burns and Scalds.
Byrn Spencer.	Typhoid Fever.
Bacon A. J.	Diphtheria.
Beasley G. Frank.	Blood.
Bucher Charles A.	Chronic Diarrhœa.
Cass Frank D.	Remittent Fever.
Coakley James E.	Hœmorrhage.
Chamberlain Ellston.	———
Dayton Ephraim.	Syphilis.
Dora James W.	Congestive Continued Fever.
Dora F. Beauchamp.	Malaria.
Eells Franklin.	Pneumonia.
Egbert J. Wesley.	Malarious Disease.
English F. Edwin.	Pre-requisites to the Practice of Medicine.
Fares J. B.	Diphtheria.
Gaylord Horace.	Circulation of the Blood.
Glasener E. T.	Inguinal Hernia.
Goodwin Lewis H.	Dysentery.
Goldsbury J. A.	Diphtheria.
Hiatt J. Milton.	Gonorrhœa.
Hill Robert Lewis.	Gun Shot Wounds.
Hallingsworth H. C.	Inguinal Hernia.
Jordon Frank A.	Diphtheria.
Jones Erwin L.	Ovum and its Development.
Jones Augustus P. C.	Colo Rectitis.
Johnson I. C.	Dysentery.
Jennings George N.	Vis Medicatrix Natura.
Kelly John J.	Reflex Action of the Spinal Cord.
Keely Leslie E.	Management of Labor.
Kelso Robert S.	The Atmosphere.

Kerrell John R.....Obstetrics.
Kinnear A. H.....Incised Wounds.
Larimer Bartlett....Typhoid Fever.
Lester Gilbert B.....Diphtheria.
Linn Timothy T.....Management of the Sick Room.
Lowell Lorenzo Dow....Scarlatina.
Lyons J. Elles....Contagion.
Macdonald Peter S.....Intermittent Fever.
McGlumphy S. B ....Evidences of Gestation.
Marion Francis....Alcohol.
Mendenhall Samuel....The Incentives and Duties of the Medical Profession.
Mix Henry A.....Opium.
Munger Martin E.....Stone in the Bladder.
Munroe James A.....Signs of Pregnancy.
Moses Jabez H.....The Liver.
Nelson Alexander P.....Placenta Prævia.
Nelson Eugene L.....Medical Science, its Progress and Lessons.
O'Brien J. N.....Diarrhœa.
Palmer Roswell R.....Bilious Remittent Fever.
Peebles G. Hial....Menstruation.
Price Edward H.....Cause and Effect in their relation to Medical Science.
Richardson Charles M.....Circulation of the Blood.
Shaffer Philip....Typhoid Fever.
Schuchard George W.....Pernicious Fever.
Smith William A.....Ununited Fractures.
Still J. M.....Diphtheria.
Stillman J. Dwight....Physical and Chemical Action in Science.
Swift John M.....——
Thayer John W.....The Accoucheur.
Tevis Joel T.....Malarial Fever.
Waterhouse Marvin....Diphtheria.
West John M.....Malaria.
Welsh William F.....Diphtheria.
Wilson Samuel....Pneumonia.
Williams J. A.....Pathology of Fever.
White Charles A.....Classification of Medicine.
Watkins James M.....Intermittent Fever.
Wood Orlando S.....Anatomy and Physiology of the Liver.
Yerkes Titus P.....Signs of Pregnancy.

The *ad eundum* degree of M. D. was conferred on Charles White, M. D., and Frederick S. C. Grayston, M. D.

BOOK NOTICES AND REVIEWS.

A Report on Hospital Gangrene, Erysipelas and Pyæmia—As Observed in the Department of the Ohio and the Cumberland. With cases appended. By M. GOLDSMITH, Surgeon U. S. V. Louisville: Bradley & Gilbert, 1863. pp. 95.

This work is a valuable contribution to science, by a Surgeon of Volunteers. Its object is to show the value of Bromine in the treatment of Hospital Gangrene and Erysipelas. In this it is singularly successful.

The author was led to try this substance from the researches of Dr. Brainard on the effects of Iodine in snake bite and other poisonous wounds, but does not seem to be aware of his use of this remedy by infiltration in Erysipelas by injection into unhealthy suppurating cavities, etc., nor of the experiments of Reynoso on Bromine as an antidote to the woorara.

But to Dr. Goldsmith belongs the merit of using it in Hospital Gangrene and Erysipelas, whether in these diseases it is superior to Iodine further experience must determine. It is never volatile, and acts more energetically on the tissues, and cauterizes when injected into them.

The following are Dr. Goldsmith's directions for the use of Bromine:

1st. Give Chloroform if required.

2d. Remove all the sloughs with the scissors, so as to apply the pure Bromine upon the living tissues.

3d. It should be repeated if fetor remains.

The author advises a solution of his favorite remedy to be left standing in the wards to prevent infection.

The table on the following page gives the results of the treatment:

CONDENSED TABULAR STATEMENT OF CASES OF HOSPITAL GANGRENE.

	Whole number.	Recovered.	Died.	Amputations.	Average duration of treatment.	Percentage of deaths.	
Treated with Bromine, in any way, - - -	152	148	4	0	5 days and 14 hours		
Treated with Bromine, pure, exclusively, - -	27	25	2	0	2 " " 23½ "		
Treated with Bromine, in solution, exclusively, -	86	84	2	0	6 " " 11⅓ "	2.65	
Treated with Bromine, pure, after the solution failed,	8	8	0	0	12 " " 18 "		
Treated with Bromine, after Nitric Acid had failed,	23	22	0	1	3 " " 16⅔ "		
Treated with Bromine, after other remedies failed, -	8	8	0	0	3 " " 4 "		
Treated with Nitric Acid exclusively, - -	13	5	8	0	3 " " 14 2-5 "	61.54	50
Treated with other remedies exclusively, - -	13	7	5	1	7 " " 13 5-7 "	38.47	
Treated with other remedies after Bromine had failed,	4	4	0	0			

This table, it will be seen, shows a result which the author does not seem to have noticed, viz: that the average results of cases treated by the solution are more favorable than those treated by pure Bromine, being 1 death in 32 of the former, and 1 in 13½ in the latter.

The results, however, are sufficiently favorable in either way to excite the admiration of any one at all acquainted with the history of Hospital Gangrene, so much so as to lead to the question whether it is the same disease.

Dr. McLeod states that the patients in his wards in the Crimea never lived over sixteen hours after the attack. The French removed their wounded early to the Bosphorous, and sixty bodies were thrown overboard from one transport ship during a passage of thirty-eight hours. The disease in the French hospitals "attacked not only open wounds, but cicatrices, and nearly every stump."

Delpech describes it as being fatal in a few hours, while Dr. Goldsmith gives the average duration of treatment, by all methods, as from three to twelve days.

We must, therefore, conclude that the disease, if it has appeared at all in our military hospitals, from which emanate these reports, has only done so in its mildest form, and in a way so closely resembling Erysipelas as scarcely to be distinguished from it. It may be added that in none of our armies has the mortality compared with that of European troops making campaigns in warm climates, a fact which speaks well for the medical department of the service, and may be due also, in some degree, to the agency of the Sanitary Commission, in furnishing supplies of fresh vegetables and other useful articles.

The following are the author's views of the method of employing his medicine in Erysipelas:

"In treating cases of Erysipelas with Bromine, the following rules are commonly followed:

1st. The face, for example, being the part affected, the parts are to be washed in soap and water, so as to remove all sebaceous matter, and then sponged in clean water.

2d. A mask of patent lint is to be prepared, large enough to cover and extend three inches beyond the erysipelatous area, and in this a ⊥ shaped incision is to be made for the accommodation of the mouth and nose.

3d. Another piece of lint, the exact counterpart of the first.

4th. A piece of oiled silk, large enough to cover the face and head, with a like ⊥ incision.

5th. Two pieces of lint large enough to cover the eye-lids are to be smeared with simple cerate and placed over the eyes.

6th. The first mask of lint is to be placed over the face.

7th. The second mask is to be wetted in the following solution: ℞—Bromine, ʒj; Bromide of Potassium, gr. xxx; Water, ℥ x.—M.—and placed over the first mask.

8th. The oiled silk is now to be quickly placed over the face and secured by a roller; the object being to cause the vapor of the Bromine to come in a dry state in contact with the skin. Some surgeons prefer the use of the solution directly upon the skin.

9th. The application should be renewed once in four hours until the disease subsides.

Sometimes the above formula proves irritating. In that case the strength of the solution must be reduced by the addition of water."

The results are most favorable, the deaths being, in cases treated with Bromine topically and with vapor in the wards, not more than about five per cent.

Synopsis of Lectures on Materia Medica and Pharmacy, delivered in the University of Pennsylvania, with Three Lectures on the *Modus Operandi* of Medicines. By JOSEPH CARSON, M. D. Third edition, revised. 8vo., pp. 244. Philadelphia: Blanchard & Lea, 1863.

This book is an outline of the course of lectures delivered by the author in the University of Pennsylvania. The synopsis evinces that the course is well arranged and complete. To be valuable to the members of the class, the outline thus given, should be filled up by the student, as the lectures are given. The three lectures on the *modus operandi* of medicines which are appended, are most ingeniously and carefully drawn up, and, in the present state of physiological science, may be received as correct.

The Nervous and Vascular Connection between the Mother and Fœtus in Utero. By John O'Reilly, M. D., F. R. C. S., I. New York: Printed by Robert Craighead, 1864.

From the author. Shall be noticed in the next number.

Journals Received.—The American Journal of Medical Sciences, (quarterly); Medical and Surgical Reporter, (weekly); Pacific Medical and Surgical Journal; Medical News & Library; The Journal of Ophthalmology; American Medical Times, (weekly); Medical Examiner; Boston Medical and Surgical Journal, (weekly); Canada Lancet; London Lancet; Buffalo Medical and Surgical Journal; Dental Register; People's Dental Journal; Cincinnati Lancet and Observer; The American Exchange and Review; American Journal of Insanity; Braithwaite's Retrospect for January, 1864.

OBITUARY NOTICES.

Dr. C. H. Cleveland, of Cincinnati, a former contributor to this journal, died in the city of Memphis, on the 1st of December last, of Congestive Pneumonia, aged 45 years.

Dr. C. was well known to the profession by his valuable contributions to the journals—and as the author of several medical works. For a year past he was in charge of the Government Hospitals at Memphis. He was industrious and energetic. By his death the army has lost an efficient officer—the profession an industrious and useful member.

John C. Dalton, M. D., of Lowell, Mass. The medical profession of Massachusetts, and to a certain extent, that of the whole country, have met with a great loss in the death of John C. Dalton, M. D., of Lowell, who died on Saturday, January 9th, 1864, in the sixty-ninth year of his age. Very few medical men who have not been connected with medical teaching or authorship have made themselves more generally known, and still fewer have been as highly esteemed as Dr. Dalton. He was, indeed, the type of *the medical gentleman*, honorable in character, courteous in manners, of integrity that no man doubted or could doubt; amiable and affectionate in all the relations of life. Such men the medical profession can ill spare.

"Peace to a good man's memory."

—*American Medical Times.*

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ORIGINAL COMMUNICATIONS.

LIGATURE OF THE COMMON ILIAC ARTERY.

By DANIEL BRAINARD, M. D.,
Professor of Surgery in Rush Medical College.

April 9th, 1863.—Called to visit Col. Scott, 19th Ills. Vols., who was wounded at the battle of Stone River. A musket ball had passed from before backwards through the thigh, entering below the pelvis and at the outside of the femoral artery, grazing the inside of the femur, and coming out of the buttock.

At the time of the accident, there was hœmorrhage, which was controled, as was supposed, by pressure on the femoral artery. The compression was continued about three weeks, during which time no hœmorrhage occurred. The wound suppurated and some small scales of bone came out at each orifice of the wound.

He was removed to his home in Chicago, and did well, although the wound remained open behind, until about the 5th of April, three weeks after the accident, when a small tumor formed in front, which was opened. A day or two after, a hœmorrhage took place from both openings. It was on ac-

count of this that my advice was asked. On the night of the 9th, at 11 o'clock, a copious hœmorrhage renewed, which was controled in a measure, but continued at intervals during the night.

10th.—Saw him at 10 o'clock, and applied the compressor over the femoral artery. This seemed to arrest the bleeding, but in about two hours it returned.

The bleeding had been so great as to threaten death, and I determined to tie the external iliac artery, not doubting from the history of the case that the hœmorrhage was from branches of the profunda femoris close to its origin.

With the aid of Prof. Freer and the Drs. Hurlburt, the ligature was placed upon the external iliac artery in the usual manner, as that described by Lisfranc; but on changing the position of the patient to remove the soiled bed clothing, the bleeding renewed as freely as ever. On a re-examination, the ligature was found to control the external iliac, and it was evident that the ischiatic artery was the one giving blood. The danger was urgent, and I enlarged the wound upward and outward, and placed a ligature on the common iliac artery. The anterior wound in the thigh was then enlarged, and a great quantity of coagula removed from it by the finger. No bleeding; patient under chloroform during the operation. Warm applications to the member; brandy and broth ordered.

11th, A. M.—Limb cool, but not cold; has been troubled with nausea and attempts to vomit, which gave pain in the wound; pulse 100, condition good. Ordered an enema and a solution of Soda Bi. Carb. with Gum Arabic for the vomiting. Broth continued.

12th.—Has considerable pain and tenderness in the region of the left kidney. Pulse 120; slept well during the night, with two doses of Acetum Opii; wounds commencing to suppurate.

13th.—Pulse 100; tenderness in left side diminished; takes broth with wine; slept well.

20th.—Cut of operation suppurates freely. Allowed beef broth and wine, with opiate at night.

24th.—Ligature on the external iliac artery came away.

May 1st.—Ligature on common iliac came away. Patient doing well.

May 12th.—Wound from operation healed.

From this time, he remained in good health until the early part of July, although the wound continued to suppurate and some small pieces of bone were discharged at the posterior orifice.

At this time he was attacked by a copious watery diarrhœa followed by typhoid fever, of which he died July 8th, three months after the operation.

TREATMENT OF PERMANENT STRICTURE OF THE URETHRA BY SUDDEN DILITATION.

By WM. B. SLAYTER, M.D., of Chicago,

Graduate Royal College of Physicians of England; Royal Colleges of Surgeons of London and Dublin; Late House-Surgeon Westminister Hospital, London.

Of all diseases of the urinary organs which fall to the lot of the Surgeon, permanent stricture of the urethra, perhaps, is the most annoying and tedious to the patient and the most troublesome to the medical attendant, and it is for this reason that I feel called upon to bring before the profession of this city a mode of treatment which has been sanctioned and adopted by many of the principal Surgeons of Great Britain, among whom may be mentioned Professor Fergusson of King's College Hospital, London, Mr. Skey of St. Bartholomews, Mr. Cutter, and numerous others of world-wide reputation.

This treatment consists in a forcible and sudden dilitation of the stricture by means of an instrument invented by Mr. Holt of the Westminister Hospital, and with which, in the

space of a few seconds, the largest size catheter may be passed into the bladder without the slightest difficulty.

Strange to say, this treatment has received very little attention in America, and, with the exception of one or two Surgeons in New York—so far as I know—has not been alluded to by any American writer. The instrument itself consists of two portions: first, two solid silver branches of the shape of an ordinary bougie, grooved internally, convex externally, and firmly attached to each other at the point; at the handle is a screw by which they are compressed together to the size of a No. 3 catheter, and between the two is a silver wire which serves as a guide for the straight hollow dilator with which the stricture is burst.

Owing to the size of the instrument it is impossible to use it until the Surgeon has succeeded in passing a No. 3 catheter through the stricture, and then it may be employed in the great majority of cases without the least fear or hesitation. In some cases this treatment has been adopted when only a No. 1 catheter could be passed, but the instrument used has been of smaller dimensions than the ordinary one.

The following, then, is the mode of procedure, after the Surgeon has succeeded in passing a No. 3 catheter: The branches being tightly screwed together, are passed through the stricture into the bladder; they are then unscrewed, and the largest size dilator, No. 10 or 11, is forcibly pushed down through the stricture on the silver guide. The instrument is immediately withdrawn, a No. 10 or 11 catheter passed and the urine drawn off. The patient is directed to take Quinine gr. ij Tinct. Opii. m. x.—three times a day for the first twenty-four hours, for the purpose of preventing any stricture fever coming on, he is also allowed to empty his bladder without the aid of a catheter for the first two days. A No. 11 catheter is again passed on the second and every alternate day for a week or fortnight, when the patient, first being taught, is directed to pass an instrument for himself occasionally.

The *modus operandi* of the instrument has, I think, been

conclusively proved by the following experiment, which Mr. Holt quotes in his work on stricture: A man died in Hospital, I believe, from disease of the chest, and at the time of his death was the subject of a very tight stricture. At the post-mortem examination Mr. Holt introduced the dilator into the bladder, split the stricture, and removed the parts. The fibrine forming the stricture was found to be completely burst open, but the mucous membrane lining the urethra remained quite uninjured. The hœmorrhage after this operation is very trifling; in the majority of cases amounting to half-a-dozen drops, and in very rare instances to a teaspoonful.

The great advantages of this over the ordinary mode of treatment by gradual dilitation are: 1st—The rapidity with which a stricture is cured. 2nd—It is less liable to return after this treatment. 3rd—Its perfect freedom from danger.

1st—The rapidity with which a stricture is cured. As I have before stated, any ordinary permanent stricture, provided a No. 3 catheter can be passed, may be cured in a fortnight; whereas, by the ordinary method, it very often takes months before a patient can dispense with the doctor. This saving of time is certainly an immense advantage, especially in cases where fistulæ, abscess, irritation or chronic inflammation of the bladder are threatened, or where these complications are already present. For by removing the stricture, these diseases rapidly get well.

2nd—Stricture is less liable to return after this treatment. Stricture, however treated, is liable to return, but it has been proved most satisfactorily that it is less likely to do so after the fibrine has been burst open than when gradually dilated. In the very few cases in which the stricture has returned, it has been clearly traced either to the patient's neglect in not passing the catheter occasionally, or to his taking cold, or a too free indulgence in drink or other excesses. I have seen very many cases, two and three years after they have been operated upon, and they have never had the slightest return of their complaint or experienced any difficulty from it whatever.

3rd—Its perfect freedom from danger. When this treatment was first brought to the notice of the profession, all sorts of imaginary dangers and difficulties arising from it were conjectured. In the first place it was said that the pain of the operation would be too great for most people to put up with. Mr. Holt at first administered chloroform; but after the first few cases the pain of the operation was found to be so very slight that it was discontinued, and now, except in very rare instances, it is never given. The next objection was that it would necessitate the retirement of the patient from his ordinary business for some time; but experience has shown that three or four hours quiet after the operation is all that is necessary.

Some imagined that this apparently rough treatment might produce abscess of the urethra, extravasation of urine, and even death. Mr. Holt has now operated on upwards of two hundred cases, many of which I have watched, when House-Surgeon at the Westminister Hospital. I also operated on upwards of fifty cases, and the only bad symptoms that have ever been noticed have been a few rigors, and these in a very few cases; and in not a *single instance* has abscess or other serious complication arisen.

In conclusion, I would say, after having had a large experience in all kinds of treatment of stricture, that I believe this, in the majority of cases, to be the very best; and I am satisfied that any Surgeon who gives it a fair trial will be very soon convinced of its superiority and will never have cause to regret having used it.

ON THE PATHOGENETIC EFFECTS OF MALARIA.

By W. C. MUNSON, M. D.

Twenty years experience in the practice of medicine, in the Mississippi Valley, has convinced the writer that all diseases induced by malaria, or miasma, have, in common, *one* distin-

guishing characteristic, viz: an abnormal reduction, or depression, of *vital force* or *power*.

In the following remarks the terms malaria, miasmas and mephitic-poison are used synonymously. "The term miasma has been very properly used to signify exhalation." There are certain exhalations from marshes, which have been supposed to cause several varieties of fever, viz: Intermittent, Remittent, Pernicious, etc.; hence the name, "Malarial fevers."

It has never been clear to my mind that all the diseases which have been ascribed to malarial causes have been thus produced. And the question is suggested, may not *other* causes, such as exposure to cold, sudden transitions from cold to heat, damp atmosphere, etc., produce disease which in its symptoms so nearly resemble that caused by *malaria* as to be readily confounded with it? May not our natural proneness to jump at conclusions without sufficient evidence have led us into frequent error on this subject? Because many cases are found to be clearly of miasmatic origin, it has perhaps been taken for granted that all this class of diseases have been produced by the same cause. And the error may the more readily be excused, when we take into consideration the fact that a vast majority of febrile diseases in this country can be clearly traced to mephitic poison. Indeed the clinical experience of most practitioners in the Mississippi Valley has convinced them that a vast majority of the diseases they meet with do thus originate. And doubtless the above pathological error has been the cause of much *seeming* contradiction in the clinical experience of so many learned members of the profession as regards therapeutics. And it is believed that a little more attention to the pathology of these diseases will enable us to distinguish pretty clearly diseases of malarial origin from all others, and thus be able to know the reason why in a few cases—and only a few—of febrile diseases, of the present day, the *antiphlogistic* treatment is imperatively demanded; while, in so many more, it is contra-indicated.

It is readily admitted that this can only be done by noticing carefully the effects of *malarial poison* on the system. All attempts to analyze and classify the peculiar poisonous elements which produce these diseased conditions will, perhaps, fail, as they have done heretofore. They have been supposed to originate from *cryptogamia* of animal or vegetable germs. But this hypothesis appears to lack confirmation. It is true that the concurrence of heat moisture and vegetable decomposition appears necessary to generate miasmatic poison.

The summer of 1854 was a very hot and dry one; so much so that many ponds and marshes were completely dried, exposing surfaces of soil favorable to cryptogamous growths; this was followed by the summer of 1855, so noted as a sickly season throughout the country, and which was hot and wet, favorable to the development and maturity of the above growths. During the rains of the latter part of this summer, and early part of the fall, almost invariably after each rain occurring in the night, a green substance was found covering the ground in the morning. Some of this the writer examined under the microscope, and found it to consist of microscopic vegetation and *sporule*. On placing some of it in cold rain water, which had been previously boiled and filtered, in two days time the water was filled with *monadal infusoria*. Whether such a condition of the atmosphere will produce disease or not, I am not prepared to say. It probably will, however.

Again, on the other hand, the old notion that carbonic acid gas is the poisonous agent, has never been abandoned. And observations in marshy districts, with the present aids of science, seem to corroborate this view. It has been observed for many years that sickly seasons are usually preceded by copious and long-continued spring rains. The marshes, ponds and low grounds are thus filled with water; under water the vegetation undergoes partial decomposition; the *carbon*, meantime, not readily escaping. Consequently its injurious effects are not much felt until, the rains having ceased, the hot sum-

mer's sun evaporates the water and leaves large masses of decayed and decaying vegetation exposed. The exceedingly unpleasant odor so universally observed to arise from marshes, especially after sundown, is thus explained. It is thought that the sensible increase of stench at this time is attributable to the carbon of the partially decomposed vegetation, set free by the rapid evaporation consequent on a hot summer day. It is assisted by the heat of the sun during the day to commingle with the atmosphere as it is set free. But when the heat is withdrawn it remains in excess for a time, until by the law of the commingling of gases it is taken up. It is argued that the peculiar sickening *odor* and sense of oppression felt on inhaling this poison under these circumstances, may be caused by this gas, modified, perhaps, by the circumstances which produce it in excess. Again, it has been observed for many years on our western prairies, that large tracts of recently "broke up prairie" appear to generate malaria. Families have been known to live for years on the "open prairie" with not a case of fever appearing among them during the time; but, an enterprising neighbor comes in and turns up the "sod" of several hundred acres in the immediate vicinity, and now, in the neighborhood of this large "breaking," they are all "down with the chills." And on passing this spot in the evening, after a hot day, much the same disagreable odor and oppressive sensation is experienced as on passing a marsh in the evening. It is believed that the poison so tangibly felt under these circumstances is a peculiar quality of carbonic gas, set free from decomposing vegetable matter, in excess.

The objection, that *carbon*, when inhaled, does not produce the effects known to follow the inhalation of miasmatic poison, is claimed to be of no force, because it has not been and perhaps cannot be shown, that the gas in question, somewhat modified, or perhaps by some catalysis, is not capable of producing all these effects. It appears to be pretty well established that the same exhalations—modified, perhaps, only by the degree of their intensity, or the idiosyncracy of the sub-

ject—produce Intermittent, Remittent, Pernicious, and other fevers.

On close attention to this subject, it will be found that there is at least *one* remarkable coincidence between the effects of malaria on the system and *carbon*, to wit: a *sensible* feeling of depression. A result, it is thought, of a reduction of the vital *force* or *action.*

It may not be of any great practical importance, however, to determine whether the poison in question is gas, infusoria, or something else; but careful clinical observation on the *effects* of the poison, must be regarded as essential.

"Life cannot be considered an abstract entity." The term *forces*, or powers of life, are understood to be used metaphorically. Nevertheless, there is what, for the sake of convenience, we will call *vital action;* which may be explained to be the effect of an unknown agency by which life is sustained, and from which results voluntary and involuntary motion, sensation and reproduction; in short, that which sustains animal life and prevents chemical decomposition of animal organisms. There appears to be three *distinct actions* continually operating in animal beings, viz: the *vital*, already explained; the *chemical*, which is continually producing decomposition, or pulling *down*, as well as reconstruction, or building *up*; and, perhaps, what it may be proper to call *electrical action.*

These actions, as is well understood, are severally and conjointly comprehended by the term, "*Chemical vital*" action, or "*Biochymia.*" But it is thought by the writer, that they each operate to perform distinct and important functions; that they are continually operating to sustain animal life, and that each is kept in equilibrium by the action of the other, or, at least, that the *chemical* is controlled or kept in due bounds by the *vital.* For it is observed that when the vital ceases to act, destruction of the organism is the consequence, by *chemical action.* Clinical experience has abundantly shown that "malarial poison" has the effect, directly, to depress, or re-

duce the "vital power or action." How? we may not be able to say. Yet the fact can not be doubted. It may be that, by inhalation, the poison comes in contact with the blood in the lungs, and an organo-chemical change takes place in that vital fluid, so that the material, perhaps, for supplying the waste of organs, is not conveyed to them. The writer inclines to the opinion, however, that the effect is first produced on the cerebro-spinal system; and, by directly reducing the vital power, impedes the entire functions of life. The blood soon becomes impoverished, perhaps, by some chemical action; the liver impaired in its functions, as well as the entire glandular system; and, perhaps, the whole system, even to the ultimate cell structures. The old liver, though slighted, and often too much neglected in these latter days of progress, is still deemed worthy of attention.

Prof. Geo. Hastley, in a paper read before the "Royal Medical and Chirurgical Society," and noticed in the London *Lancet*, says: "The liver is the great laboratory for the manufacture of blood corpuscles in man. Hence the *anæmia* which so speedily follows the suppression or impairment of its functions."

This depressing effect of the poison in question—judging from its effects—impairs the vital action, and, as a consequence, an increased chemical action follows. And as all chemical action, whether in organic or inorganic matter, evolves heat, and more or less electricity, and this electricity, it is believed, comes in aid of the vital power, and prevents serious organo-chemical decomposition. Electrical action is a result of, or is connected with chemical action, in which, during the process of composition and decomposition of the various animal tissues, electricity is developed to be either retained in the system or set free; and which, in many of its actions, bears a close analogy, almost amounting to absolute identity, with vital action; and, perhaps, for which it may act as a substitute sometimes, and thus preserve health and life, where the vital action is impaired. Vital action may be, for all that is

now known, closely allied to electricity, possibly dependent on it. It may be hoped that much that is important in pathology, may yet be learned, by investigating the subject of electricity in its connection with animal life. Health consists in an equilibrium, or correct proportion of these several actions in the system, and when there is a derangement of this equilibrium, a lesion of the living tissues results from an increased chemical action, and disease or death ensues. Chemical action appears always to increase in an inverse ratio to the amount of depression, or sinking of the vital. The phenomena of fever, is believed to illustrate this view. The cold stage, or chill, it is assumed, is the direct effect of depression; and now, as the vital power is depressed, the chemical action preponderates. If not enough to produce perceptible organic lesion; yet always enough to produce functional derangement. And the tissues involved undergo these chemical changes according to the reduction of their vital energy. But this chemical action—as before observed—evolves heat and electricity. And electricity being the best substitute for vital action with which we are acquainted, assists in preserving the system from the more deadly influence of chemical decomposition until its normal functions are restored. It also contributes to augment the temperature of the body, and thus produces—or contributes to—that exacerbation of heat called fever. Perhaps death would result from each chill which precedes fever, was it not for the increased chemical action which, by its accompanying electricity, now comes in aid of the vital powers, and thus prevents farther destruction, until by reaction the vital action is again established.

If the above positions should come to be regarded as established facts, an important step will have been taken in pathological science, and consequently in therapeutics.

This hypothesis, if true, throws much light on certain facts established by clinical experience, but never fully explained. Such as, the unusually rapid dissolution attending the diathesis popularly known as congestive chills. These cases appear

to be suddenly fatal, either from the virulence of the poison, or from the inability of the system to resist it. Consequently, the reduction of the vital power is so sudden and complete, that reaction does not take place; and the lesion caused by chemical action uncontrolled by the vital, results in the speedy death of the patient. And again, in inflammatory fevers of the asthenic type, a superabundance of *fibrine* has been found in the blood. And M. Trousseau, in a recent lecture in Paris, pointed out the striking analogy existing between the more serious symptoms of typhoid fever and those consequent on protracted abstinence, that in both, the blood has an excess of fibrine. It is suggested that fibrine may exist in the blood, not only as material for rebuilding and supplying the waste of organs, but it may also exist as the *debris* of wasting, or impaired organs—*i. e.*, cast off material in process of elimination from the system. Its presence so largely in the blood of animals undergoing starvation, seems to corroborate this view. Hence the anæmia so rapidly following in fevers of this type; and the conclusion is thus strengthened, that in all diseases of malarial origin, whether of intermittent, remittent, or typhoid type, the asthenic condition will be manifest, and that the excess of fibrine in the blood in these conditions is referable to the lesion of the living tissues by chemical metamorphosis, resulting from lack of vital action.

Fever, then, should be regarded, not so much as a disease, as an "effort of nature," to throw off disease. And yet, it is manifestly absurd to call it a "healthy action." Because, unquestionably, the condition is abnormal, and therefore should not be called healthy. If the above be the true pathogeny of malarial diseases, the adaptation of therapeutics to this pathogenetic view, must be regarded as essential. And the truth of the terse, and somewhat eccentric remark of a certain writer, is brought to mind, that "the patient should always be treated instead of the disease."

The clinical experience of so large a number of observing practitioners, both in Europe and America, coinciding in the

rejection of the antiphlogistic treatment in so many cases of inflammatory and pernicious fevers, may be claimed as corroborative of this hypothesis.

The following remarks, made by M. Herard, in a clinical lecture at the "Hotel Dieu," at Paris, bear upon this point, "The treatment of typhoid fever is, of course, different, according to the theory adopted on the nature of the disease. Those who adopt the theory of follicular inflammation of the intestinal tube—an ulcerous affection of Peyer's glands—as the cause of the disease, consistently apply antiphlogistic remedies."

In the opinion, however, that this inflammation, or the decomposition of local secretions, and consequent absorption of poisonous fluids calculated to induce a septic condition, is the proximate cause of this disease, M. Herard does not concur, but believes these local injuries effects, not causes.

He then says, "Hence the local derangements can not be taken as a guide, in the choice of medication most appropriate to a fever, in which the collapse of vital power, and obvious tendency to mortification, points most distinctly to a primary alteration in the composition of the blood."

This author then proceeds, in a brief summary, to give the treatment most appropriate in typhoid, in which he assigns the most important place to food: "Despite the wise precepts of Hippocrates, despite the recent researches which have only confirmed their value, we are still all more or less influenced by the now exploded doctrine of irritation. The terms fever, and food, still appear to imply a contradiction, although it is but too certain, that in typhoid, prolonged abstinence leads to the most disastrous results." He then gives the history of a case of typhoid, of alaxic form, accompanied with delirium, vomiting, and diarrhœa, successfully treated with food alone. He found it almost impossible at first to carry out this plan of treatment. It was with the utmost difficulty that a few drops of beef tea were swallowed. He succeeded, however, by dint of perseverance. And when the food remained on the stom-

ach, and in proportion to its increase, the pulse fell from 145 to 130, 120, 115 and 100, the delirium yielded, and, in short, the patient recovered. Again, he says, "Patients who have received adequate support during the progress of typhoid have been known to pass without any transition from disease to health, and walk in the garden of the hospital on the very first day they left their bed."

The abridgement of convalescence in the cases reported by M. Herard seems to illustrate the foregoing pathological views. The diet treatment, by supporting the vital powers, prevents the lesion which otherwise must have occurred by chemical metamorphosis.

Prof. Flint, of New York, says: "In inflammatory affections, proper discrimination is necessary in the employment of the so called antiphlogistic measures, which, if failing to exert a controlling influence, are always hurtful, and it may be, destructive, by impairing the vital forces. Experience also dictates the judicious use of remedies addressed to the internal causative conditions pertaining to the blood; so far as our present knowledge in these most important provinces of pathology and therapeutics will permit. But this is not all, this diathesis often demands that the vital powers be sustained. Sustaining measures of treatment, practically considered, consist of tonics, alcoholic stimulants, and nutritious diet. We will not inquire as to the *rationale* of the operation of these measures; suffice it to say, clinical experience shows abundantly, that they lessen the degree to which the vital forces would otherwise be impaired by disease, and may prevent a fatal termination of disease by asthenia, or exhaustion." Prof. Flint proceeds in an elaborate and very clear style, to show what important changes have been almost universally adopted within a few years past, in the treatment of many diseases, by discarding depletory measures, and adopting instead, stimulants, tonics, and nutritious diet. In reference to bloodletting, he goes on to say, "Clinical observation, which is alone competent to settle the question, has shown that it is a

remedy not called for so often, nor to so great an extent in acute inflammations, as was supposed but a few years ago." He makes the following remark in reference to blood-letting, and says it will apply to other measures as well: "Blood-letting may not increase the mortality from a disease, nor protract its continuance, and yet prove injurious. The injury may be manifest only in the slowness of convalescence, and the impaired condition of the system after recovery." And here, perhaps, the same explanation will apply as that given above, to M. Herard's case of convalescence abridged by diet treatment. Again, the same author says, "Every sagacious practitioner knows that certain symptoms, no matter with what disease they are associated, denote failure of the vital powers, or inability to resist disease. He estimates the amount of danger by these symptoms, and often bases his prognostics far more on them than on the nature and extent of the local affection. Every practitioner knows that an inflammation, the same in all respects so far as the local affection is concerned, in different persons, affects the vital forces differently.

Take, for example, pneumonia, extending over the same space, and inducing an equal amount of changes which physical explorations enable us to determine with accuracy. One patient manifests but little disturbance of the system, and no symptoms denoting danger, while another will succumb to the disease. It is also well known, that some persons while in health, show no lack of vigor, yet have very little ability to resist disease. They are quickly destroyed by affections which other persons readily endure, and endure, perhaps, without much inconvenience. Of course, these facts are explicable, but not with our present knowledge; and until explained, it answers to refer them to differences as regards the vital powers, or forces. They are facts of not a little practical importance." Again, he remarks, "Since physicians have ceased to agree with Southwood Smith, in regarding inflammation as an almost concomitant, and the chief source of danger in fever, the importance of preserving and sustaining

the powers of life has been more and more appreciated; and at the present moment, with the most intelligent practitioners, these are the leading objects of treatment."

Prof. Flint has been quoted thus at length, because of the apparent coincidence between many of his very just conclusions and the writer's pathological views of malarial diseases. And it is hoped that when the subject of chemico-vital action comes to be better understood, as well as the phenomena of electricity in connection with it, much that is now obscure will have been explained.

The important practical lesson designed to be presented in the foregoing remarks, is to give some clear marks, if possible, by which diseases of malarial origin can be distinguished from diseases arising from other causes. And if this attempt should shed any light on the pathology of these diseases, it must in the same ratio contribute to therapeutics, and, consequently, lead to much greater uniformity in the treatment of a class of diseases, by far the most numerous with which we meet.

It is not clear—as above remarked—that some diseases are not ascribed to malaria, which do not belong to it. And on the other hand, unquestionably, error is often committed by overlooking some clear marks which distinguish malarial from other forms of disease. It is true, few would fail to recognize these marks, in cases like that reported some years ago by Dr. Parry, in a thesis read before the Medical Society in Philadelphia—which is said by some writer, to have fallen like a bombshell at the feet of the professors of the Jefferson Medical College—when he quietly asked, "What shall I do with the pulseless, moribund cases of congestive fever, of the Mississippi?" Possibly, *some* might reply yet, as did Prof. Meigs *then:* "The lancet! the lancet! the lancet!"

It affords much pleasure, however, to believe, that a great majority of physicians *now*, understand these cases better.

Yet, it is believed, by keeping in view the foregoing suggestions, on the effects of malaria, error in diagnosis will much more seldom occur. In the limited experience of the writer

—and, no doubt, in that of most practitioners—cases of fever, and even flux, have been met with where, perhaps, the inattentive observer would have pronounced them malarial; but where, in reality, no such characteristic symptoms were manifest. On the contrary, there was strong, full pulse, furred tongue,—not coated—and no marks denoting depression of the vital powers, and which yielded readily to full antiphlogistic treatment, as blood letting, &c.; attended also, with little, or no convalescence.

On the other hand, cases clearly of inflammatory conditions, as Pneumonia, Pleuritis, or Pleuro-Pneumonia, and other forms of the so-called congestive fevers,—where marks of vital depression were clearly discernable,—have shown such wonderful tolerance of stimulants, that even pints of alcoholic spirits were given daily, with no other apparent effect than to lessen the frequency of the pulse, diminish the heat of the skin, and render the mind more clear; and under this treatment readily recover.

It is apparent then, that diagnostic errors in these cases can only be avoided by careful clinical observation of these morbid symptoms, and not by any attempt at classification of these diseases upon any other basis.

CLINICAL LECTURES ON DISEASES OF THE EYE.

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THE CORNEA—ANATOMY AND PATHOLOGY.

Gentlemen: You have already seen a large number of patients with chronic conjunctivitis, in nearly all of whom there were secondary affections of the cornea. That you may understand these secondary affections of the cornea, I shall

call your attention to the structure and diseases of this important portion of the eye, before finishing what I wish to say upon chronic inflammation of the conjunctiva and its treatment. I have stated that the diseases of the conjunctiva claim your first and most careful consideration, as being most common, and primarily the cause of more cases of blindness in the Northwest, than the diseases of any other part of the eye. It is scarcely less important for you to study well the cornea and its diseases, since it is by the destruction of a part or the whole of the cornea that conjunctivitis so often destroys vision.

The cornea is a circular membrane, composed of three principal layers, the middle of which, or the true cornea, is attached at its periphery to the sclerotic. The line of demarcation between the cornea and sclerotic is quite abrupt, but the fact, that the external layers of the sclerotic project slightly over the posterior layers of the cornea gives the appearance of indistinctness to the line of union. The manner in which the crystal of a watch is inserted in its rim is a good illustration of the relative position of the cornea and the sclerotic. The conjunctiva encroaches slightly upon the cornea, especially at its upper and lower portions. This rim—the limbus of the conjunctiva,—is sometimes, even in the young, so broad and opaque above and below, that the cornea presents a very decidedly oval form. The limbus conjunctival is exceedingly liable to become vascular in inflammations of the conjunctiva.

The limbus must not be confounded with the arcus senilis, which is a narrow grey ring running parallel with the periphery of the cornea, but situated within a narrow ring of transparent cornea.

Mr. Canton has written a monograph, showing the relation between a tendency to fatty degeneration and the arcus senilis. This change in the cornea may probably be regarded as normally incident to advanced age—like the presence of grey hairs, falling of the teeth, and presbyopia.

The thickness of the cornea is about half a line, being somewhat more at the periphery than at the centre, in the adult. The degree of convexity in the normal eye is nearly absolutely the same in all its diameters. Occasionally, the convexity is found to be more in one diameter (meridian) than in another, as you will learn, when you study the use of lenses in certain abnormal conditions of the refracting media.

The cornea is a very firm membrane, as is proved in cases of rupture of the globe by simple pressure. The sclerotic almost invariably yields before the cornea.

Although it seem to be a perfectly homogenous, glassy membrane, it is quite complex in its structure, as is shown by the microscope and the action of certain reagents. It is composed of three layers: 1st, the epithelium, which is a continuation of the conjunctiva; 2d, the true cornea, a continuation of the sclorotic, and 3d, the serous membrane, which is in contact with the aqueous humor, and is a continuation of the outer layer of the choroid.

The true cornea is composed of fibrous tissue, resembling, in some respects, the ordinary areola tissue of other organs. In this tissue is found a large number of spindle and star shaped cells, with numerous minute tube like appendices, ramifying in all directions, which last are supposed by some to be connnected with the process of nutrition. There are no true capillaries in the cornea, except at its periphery. The ciliary nerves are traced into the substance of the cornea in the form of delicate transparent nerve tubes.

The epithelium is composed of three layers, each of which is characterized by the peculiar appearances of its cells. The serous layer is composed of a structureless membrane, covered with epithelial cells, in direct contact with which latter is the aqueous humor.

It should be remembered, that in the fœtus, all these elements are quite opaque. As development progresses, they become less and less opaque, till, finally, they are united firmly into a transparent, nearly homogenous membrane.

The cornea is not only the window, as it were, by which light is simply admitted into one of the chambers of the brain; it is also one of the instruments, by means of which perfect images of external objects are formed upon the retina.

The cornea is subject to several very important diseases—nearly all of which are different phases of inflammation. A few words regarding their pathology will enable you to understand the manner in which they prove destructive to vision.

The first visible indications of inflammation in the cornea seem to be confined to the spindle and star shaped cells, and to the deeper cells of the epithelial layer. These cells and their appendices become filled with greyish granules, and much enlarged. They encroach upon the intercellular substance, which is absorbed or transformed into a fatty mass, mingled with pus cells; the tissue is destroyed. If the process is confined to the surface, the cells are cast off, leaving excoriations, or ulcers. If it is limited to the middle layers, abscesses are formed. An abscess, by the rupture of its outer walls, may be transformed into an ulcer.

This process, although it is the same in all cases of inflammation, is exceedingly variable, as regards its extent and rapidity of its course. It may be confined to a very minute superficial spot or spread over an extensive surface, causing a minute or extensive excoriation; if somewhat deep, a deep ulcer will be the result, varying according to the extent and depth of tissue affected.

Sometimes the diseased action will continue for months, without scarcely any change; or it may speedily terminate in the destruction of nearly the whole cornea. It is often difficult to explain these differences in cases in which all the conditions seem alike.

A very common affection of the cornea, and one exceedingly liable to accompany chronic inflammation of conjunctiva and "granulated" lids, is the so-called vascular cornea. Already in the earlier stages of acute conjunctivitis the fine capillaries of the limbus of the conjunctiva are observed to be

enlarged, and filled with blood. The irritation produced by the constant rubbing of the roughened palpebral conjunctiva increases the inflammation. The changes in the spindle and star shaped cells take place as above described; their appendices anastomosing freely with each other, form a network of capillaries. A greyish colored exudation is also found in the superficial layers of the cornea, around these new vessels. This change usually takes place on the upper portion of the cornea, in consequence of the motion of the upper lid. Abrasions of the cornea, produced by burns, scalds, and other injuries, or repeated attacks of phlyctenulae, may also be the cause of the growth of vessels upon the cornea. As the vessels increase in number, and as lymph is deposited around these vessels, the surface of the cornea becomes roughened and red, presenting somewhat the appearance of "granulated" lids. This condition is known by the term Pannus, and may exist over a part or the whole of the cornea.

I have briefly explained the manner in which ulcers and abscesses are formed. Occasionally, the pus of the abscess is discharged through its posterior wall, the anterior wall remaining intact; in this case, the pus is discharged into the anterior chamber, forming what is called Hypopion. If the suppurative inflammative attacks the deeper layers of the cornea, the pus is sometimes diffused between its layers, (usually downwards) till it reaches the inferior line of separation between the cornea and sclorotic. In this case the pus renders the lower part of the cornea opaque, the opacity being convex at its lower border and irregular at its upper edge, and is called onyx, or unguis, from its resemblance to the lunula of the finger (thumb) nail.

The diseased action, as above described, especially the formation of ulcer, is induced by conjunctivitic. The disturbance of the process of nutrition, the pressure of granulations of the lids and particularly the pressure of the œdematous conjunctiva, encroaching upon the edge of the cornea, as it often does in acute conjunctivitis, induce ulceration in this important part of the eye.

But what is the final result of these abnormal changes? The ulcer, whether superficial or deep, may heal; leaving the cornea perfectly transparent. The contents of an abscess may be absorbed and the cornea left in its normal condition. And it is astonishing how speedily an ulcer, an onyx or a Hypopion will sometimes disappear, and how completely the cornea will resume its normal appearance.

But, unfortunately, the termination of these lesions is not always so favorable. The disease may become chronic, causing the patient much suffering and even loss of sight. The new tissue, which takes the place of the abscess or ulcer, instead of being transparent is too often opaque—hence opacities of the cornea. If the opacity is extensive or situated from of the pupil you can readily see how the rays of light are prevented from entering the eye.

Another unfavorable result of ulceration, is perforation of the cornea. The acqueous humor is then evacuated, and the iris and lens thrown forward in contact with the cornea. If the perforating ulcer is very minute and in the centre of the cornea, it may soon heal and the iris and lens be restored to their normal position, since the plastic lymph from the ulcerated cornea is deposited within the space occupied by the pupil without touching the iris and without binding the iris and cornea together. Occasionally in such a case the lymph will be thrown upon the centre of the anterior capsule of the lens, and we there have a small central opacity of the anterior capsule.

But if the perforation is near the peripheny of the cornea, the iris is very liable to form an adhesion with the cornea. Recovery with good vision may result. When the opening is extensive, a portion of the iris almost inevitably protrudes through it. Although vision may sometimes be retained, the inflammation of the iris and cornea is apt to cause softening of their tissues; as the perforation becomes filled with a portion of the iris and lymph, the softened cornea is no longer able to support the pressure outwards of the fluids of the globe and a

projection occurs, called staphyloma. Not unfrequently the whole cornea from the effects of extensive ulceration or chronic inflammation, becomes softened and unable to support the pressure of the contents of the globe. The consequence is a large unsightly tumor, called total staphyloma of the iris and cornea. The walls of the staphyloma may be very thin, or they may be very thick and firm, in consequence of the organization of a large quantity of lymph within or upon the diseased tissues.

Sometimes the cornea, softened by inflammation, is pressed outwards in the form of a cone or of a hemisphere, and may retain its transparency. This condition is called corneal cornea. There is almost an infinite variety of form presented by the diseased cornea.

Before closing, I must repeat what I have before endeavored to impress upon your minds, that it is impossible for you to acquire skill in detecting the commencement of these changes in the cornea, without cultivating the habit of examining carefully the cornea, iris, pupil, and their relative normal position, in a large number of healthy individuals.

SELECTED.

ON THE PRESENCE OF AIR IN THE VEINS AS A CAUSE OF DEATH.

By JAS. SUMNER GREENE, M. D.,
Of Dorchester, Mass.

[Continued from February number.]

To return to the case under consideration. At the autopsy there was found to be slight but general peritonitis. (We have no account of the previous health of the patient.) The uterus contained a fœtus of from four and a half to five months, with membranes intact. No marks of mechanical injury were noticed. The placenta was easily to be broken down, and there were two small clots beneath it. No signs of hemor-

rhage were found in the vagina nor about the clothes nor bed. Dr. Hitchcock, hearing the husband's testimony, formed the opinion that she died from forcible entrance of air into the circulation, through the uterine sinuses. His opinion being made known, the body was disinterred and re-examined five days after death. It was intended to tie all the vessels and open the heart under water; but one of the ligatures slipped off when the vessel was cut, and a puff of air was heard by all present. There was engorgement, probably cadaveric, of the large viscera.

(A careful report of this case, by Dr. Hitchcock, will be laid before the American Medical Association at its next meeting.)

Enough evidence has now been advanced of the liability to the entrance of air into the veins during certain operations in surgery, and under certain conditions of the uterine system, to put every practitioner on his guard against the circumsances which have been shown to be dangerous. Indeed, those most skeptical as to the cases cited admit the prudence of proper precautionary measures. But are there not other occasions, of more or less frequent occurrence, in which the possibility of danger is almost equally manifest as in some of these?

If death has been produced by the mere puncture of the seton needle in the neck, in the hands of a skillful operator, what shall we say of the danger in the operation of tracheotomy, now so frequently practised? Here we meet veins of at least equal calibre with those wounded in certain of the fatal cases, and which the most careful surgeon cannot always avoid. These veins lie on, or within, the borders of the region shown to be the most dangerous, and at the time of such operation are generally turgid with blood. What more is needed than the entrance of the scalpel at a certain angle, combined with traction of the tissues in a certain direction, to open the door to the entrance of the unwelcome visitor? Yet we are instructed by surgeons, if a vein is wounded, to complete the operation as soon as possible, without reference to bleeding, as its completion will at once relieve the loaded vessels and check the hemorrhage; while no word of warning is concerning the possibility of this fatal complication.

Even the simple insertion of a subcutaneous syringe may be conceived to carry with it possible danger. These instruments are liable to take up and eject as much air as water, as we know from experience. The improved syringes of glass show its presence, while those in ordinary use, made of gutta-percha, conceal it.

The dangers to be guarded against in those more rare but very important operations, the transfusion of blood in anæmia, and the injection of water impregnated with salts, in cases of cholera, cannot fail to suggest themselves here. Indeed, there is a statement by the late Dr. Francis, of N. Y., (*Med. Magazine*, Nov. 1832), that in the few autopsies of bodies after venous injection, during the cholera epidemic, great cerebral congestion was found, and air within the heart, aorta, and larger bloodvessels. Allusion was made at the same time to the horrors of death after this operation, but we find no account of symptoms. (See also Experiments on the Transf. of Blood, by Dr. Jas. Blundell, *Medico-Chirurg Trans.*, ix. p. 65.)

We have quoted cases of the introduction of air into the bloodvessels by means of suicidal wounds; but neither Guthrie nor any other of the great authorities in military surgery have noted this as a complication of wounds received on the battle-field. One allusion of this sort we do find. It is stated by Sir Charles Bell (*Practical Essays*, Part I,) that Baron Larrey, while examining with him some sketches of the wounded at the battle of Waterloo, noticed particularly the case of a young man who had been wounded in the lower part of the neck. "Well I know," said this excellent surgeon, "how that young man must have died. I have seen so many wounded during my campaigns, and die from air drawn into the veins." In sabre wounds about the dangerous region we should suppose this accident might be of frequent occurrence; less so in gunshot wounds, where retraction is more likely to close the mouths of the vessels; yet even here it is easy to conceive that in many cases they may remain patulous until closed by coagula. This is a subject which well deserves investigation, and the opportunities offered by the present war to settle it should not be overlooked. The difficulty of making sufficiently careful autopsies near the battle-field, where, if at all, these accidents must take place, is an objection which might be obviated by the detailing of a surgeon for that especial purpose.

We come now to consider certain possibilities more important even than those just recited; more important because they come within the range of every physician's daily practice. We have seen that the injection of gas or liquids into the uterine cavity is attended with danger; yet we have no doubt that both agents are still used for procuring uterine contractions, for the relief of pain, or as disinfectants, without the slightest precaution.

It is not long since Prof. Simpson has discontinued and discouraged the actual injection of carbonic acid gas into the os uteri. (*Edinburgh Med. Journ.*, Sept. 1861, and *American Journ. Med. Sci.*, Jan. 1862, p. 271.) Two instances of sudden death during such injection are reported by Scanzoni. The one of which we have read the particulars (*Brit. and For. Med.-Chir. Rev.*, vol. xxvi, p. 274,) seems to us to point very clearly towards entrance of the gas into the veins as the cause of death.

Mr. James, of the City Lying-in Hospital, London, passes an elastic catheter through the os, between the uterine walls and the membranes, to the extent of four or five inches, and injects cold water by means of an elastic bottle. (Simpson, *loc. cit.*) We can hardly conceive of a more dangerous practice, at least in the hands of those unaccustomed to it, when we remember the ease with which a vein might be punctured and air admitted with the water, to say nothing of the injurious effects of water itself in the circulation. Prof. Simpson himself was greatly alarmed, on one occasion, at seeing a patient faint under the use of Higginson's syringe, an effect which, he suggests, was probably due to some of the fluid (perhaps air) getting into the circulation. Dr. Robt. Barnes (*Obstet. Trans.* 1861, p. 119) states that several cases are known in which death has speedily followed the injection of fluid into the non-pregnant uterus, and says that unless care is taken, air is very apt to be thrown up with the water by any of the ordinary siphons or pumping syringes. He refers to a case reported by Dr. Guiller (*Gaz. Méd.*, 1857), in which injections of water being ordered to cleanse the vagina of a woman wearing a pessary, water mingled with air was thrown into the uterus and forced through the Fallopian tubes into the peritoneal cavity, adding that it may be conjectured that air also found its way into the bloodvessels. Dr. H. R. Storer, of Boston, goes still farther and condemns—as we think very justly—the use of Keiler's caoutchouc air pessaries, on the same ground. In an able paper recently read by him before the Suffolk District Medical Society on artificial dilatation of the cervix uteri (*Boston Medical and Surgical Journal*, July 3, 1863), he states that several cases of death from the use of these means have occurred, and names the entrance of air into the vascular system as the most probable explanation of this fatality. Dr. Storer informs us that he has always opposed the use of any of the means by which this class of accidents is rendered possible, and he considers it one of the

chief merits of his method of dilatation, that it places the occurrence of danger from this source out of the question.

If it is urged that accident under such circumstances as we have alleged must be so rare as not to deserve notice, since scarcely any are recorded, we point in answer to the fact that 50 years ago the possibility of accident from this cause under *any* circumstances was not even suspected, while the first instance of the kind, occurring after parturition in the human species, was not noticed until several years after Legallois and Ollivier had suggested its possibility. If we are forewarned of the danger, it may serve not only to bring so light proofs of its reality which would otherwise have slept, but to preserve valuable lives which would otherwise be sacrificed; and it should be remembered that a single accident must weigh more in the affirmative than scores, or even hundreds, of fortunate cases could do in the negative.

Before proceeding to consider the mechanical conditions favoring the accident, and its proximate cause, some mention should be made of a class of cases very analogous to the preceding, viz., those in which gas seems to be developed within the vessels instead of admitted from without. In fact, there appears to be a regular gradation of instances, from such as are evidently wholly physiological to such as are as clearly due to the operation of physical laws; so that the two classes merge into each other, and it is difficult to decide to which some of the cases belong. Thus, the fact of the secretion of gas by mucous lining of the stomach and intestines is too common to require comment. Instances are reported on good authority where the skin and bladder have exhibited the same phenomena. Sir Francis Smith witnessed an instance of this sort, in a hypochondriac patient, where the water of the bath in which he lay became covered with bubbles, which proceeded from the surface of his body. (*Dub. Journ. of Medical Sciences*, 1841, p. 454.) Prof. Puchelt thinks that in certain persons bubbles of air not unfrequently form and explode within the current of the circulation itself, and is familiar with one kind of palpitation, which gives the precise idea of bubbles bursting in the heart. (Jones and Sieveking, *Path. Anat.*, p. 364.) A step further brings us to those cases wherein sudden death has occurred, and where careful dissection, frequently made so early after death as to leave no room for changes of decomposition, has brought to light nothing but the presence of air in the heart and veins to explain the event. Cases of this sort are mentioned by Morgagni (*op cit.*, secs. 20, 24) as

having been remarked by Verdriesius, Grætzius, Ruysch, and himself; and the death of Albrechtus, Prof. of Anatomy at Gottingen, is cited as being of the same kind. Dr. Cless, of Stuttgard, has published 14 cases, in most of which the patients were suffering from blood-poisoning. (G. May, *Trans. of Path. Soc. of London*, vol. ix, p. 154.) Air is said to have been found in the veins, after death from strychnia poisoning, from hydrophobia, and from inhalation of chloroform. (*Id.*) Mr. May reports several cases. In one, the patient being taken ill, the medium vein was opened and much frothy blood escaped; sudden death occurred, and air was found in the heart. In another, there was ulceration of the cæcum, and air was found in the veins, from the ulcer to the heart. A third occurred during the catamenial period, and air was traced from the left lateral ligament of the uterus to the heart. In a case of gangrene of the great toe, air was found from the seat of the lesion to the heart. In a 5th case, the patient recovered from two attacks of sudden cough, followed by insensibility, lividity, coldness of extremities, rapid pulse and respiration, ending with the expectoration of much frothy mucus tinged with blood, and the third attack proving fatal, the autopsy disclosed air in the pulmonary vessels and frothy blood in the cavities and vessels of the heart. In all these cases the autopsy was performed within 30 hours after death, and there was no evidence of decomposition.

It is impossible not to associate this class of cases with that immediately under discussion; and we must admit the possibility of some peculiar and unfrequent condition of the system, which predisposes to the reception of the noxious agent, or to the more rapid development of fatal effects. This of course is mere conjecture, but if we admit its possibility, it will help to explain the supposed rareness of the accident, compared with the frequency of the occasions in which the mechanical conditions favoring it are presented. In those cases where gas is unquestionably developed within the vessels, it would be useful to its exact composition, and thus determine whether it is generated by decomposition of the blood, or merely set free from solution in the fluid. Prof. Bacon informs us that investigations have yet to be made to decide this question, and that the necessary experiments and analyses, though complicated, would be entirely practicable.

If the gas is really set free from solution, it is probably in consequence of some change in the blood, as incompatible with life as actual putrefactive change; for though it is de-

monstrated by the experiments of Bischoff, Magnus, J. Davy, and others, that a large percentage of carbonic acid and oxygen gas both exist in healthy blood (Carpenter's *Prin. Human Physiol.*, p. 1598, and Lehmann's *Physiol. Chemistry*, vol. i, p. 570, and vol. ii, p. 474), yet it is unlikely that either of these could be liberated from solution, and thus cause death mechanically, without some essential change in the vital properties of that fluid which would render it incapable of fulfilling its part in the economy. Yet the mechanical cause may, nevertheless, and probably does, have its share in the fatal issue, and perhaps controls the character of the symptoms.

The mechanical conditions under which air has obtained entrance into the circulation during surgical operations have been pretty thoroughly canvassed. It was shown by Messrs. Barry and Poisseuille that a marked influence was exerted on the current of blood, in certain of the larger veins at the summit of the thorax, by the movements of the chest in respiration, its flow being accelerated during inspiration, and checked, and to a certain degree reversed, during expiration, producing the phenomenon of a venous pulse in that region. This was shown to be due to a sucking action, exerted upon the venous current by the expanding chest. Within this region, the *espace dangereuse* of Amussat, including the lower portion of the internal jugular, the subclavian, and the upper half of the axillary, the opening of a vein was shown to be always followed by the admission of air. It was noticed by M. Bouilland that when the movements of respiration became feeble, the flux and reflux in the veins no longer correspond to the movements of the thorax, but became synchronous with the beat of the heart; and we have noticed this change in the frequency of the venous pulse, in the exposed jugular vein of a cat, before any vessel had been punctured. It corresponds entirely to the circumstances already noticed in connection with the lapping sound produced by the entrance of air at a wound. M. Berard demonstrated by careful dissection, that those portions of veins, subject to flux and reflux, were united to neighboring bones and muscles by aponeurotic laminæ or bridles which kept them expanded, while elsewhere nothing hindered their natural tendency to collapse from atmospheric pressure when not distended by blood. (Velpeau, *op cit.*, p. 453.) Velpeau and others denied the possibility of the accident beyond the range of the venous pulse, but it has been sufficiently demonstrated by various observers, as well as by the experiments of the commission, that many circumstances

may and do operate to extend the area of danger, so as to include smaller veins, as well as those at a greater distance from the heart, and the limits of the danger have not yet been definitely fixed. Any circumstance which prevents the collapse of the vessel under the pressure of the atmosphere invites the entrance of air. Among these conditions are a forced inspiration, during which the platysma, sterno-cleido-mastoid and anterior portion of the trapezoid muscles are lifted off the veins which underlie them, thus allowing them to dilate (Sir C. Bell, *Practical Essays*, p. 17); dragging the forcible distension of a vein during an operation, either by the necessary position of the patient, as in a case of Dr. Warren, or by manipulation of the parts while dissecting, as in the case of Dupuytren and Roux; adhesion of the vein to morbid growths; and thickening of its coats from chronic inflammation. Something depends on the position of the patient, whether erect or recumbent, the former being more favorable to the occurrence of the accident from the comparative emptiness of the veins about the neck, thus placed above the horizontal plane of the heart. The character of the incision into the vein also has an important bearing on the chances of accident. Thus, if a portion of its wall is removed, yet not enough to prevent the onward flow of blood within it towards the heart, air is likely to be drawn with it into the circulation; if the vein is partially divided trasversely at the bottom of a wound, the drawing apart of the flaps may furnish an opening sufficiently large, while complete division transversely would favor immediate collapse and retraction if the veins were not canalized in any of the ways before mentioned. A fact stated by Sir Charles Bell helps to explain the ready entrance of air into a vein through which the current of blood continues to flow. "When water flows through a tube, the tube being gradually larger at its further extremity, and a lesser tube inserted into it, water will not flow from the larger tube into the smaller, but from the smaller into the larger. This corresponds with the course of the blood in the veins; for the lesser veins are inserted into a series of trunks, gradually enlarging in their diameters till they reach the heart. In these circumstances, a hole in the side of the tube will not discharge water, but will admit air." (*Op. cit.*)

The conditions by which air enters by the uterine veins have been less carefully studied. Prof. Simpson says (Reid, *op. cit.*, p. 580), "As to the mechanism of the introduction of air in such cases, I think we can understand it, when we re-

member that the interior of the uterus after delivery, especially opposite the late seat of the placenta, is studded with venous orifices, and that, if air does once become introduced into the uterine cavity, from relaxation of the walls of the organ, it will be liable to be forced into these orifices, and hence into the general venous circulation; providing the uterus, in again contracting, is unable to expel its contents through the os uteri." Dr. McClintock refers to the large size of the veins of the gravel womb, their freedom from inosculation, the total absence of valves, and their termination on the internal surface of the uterus, at the site of the placenta, by large open orifices. "If the uterus," he remarks, "be examined soon after delivery at full term, the majority of these apertures will readily admit a goose-quill, and some will even allow the little finger to penetrate without laceration. During contraction of the uterus, all the openings are hermetically closed; but when it is relaxed, they again become proportionately more or less petulous. From this it is manifest, that the same condition of the organ which causes flooding, is exactly that which is indispensable for the ingress of air; so that the latter, when it does take place, is almost of necessity preceded, or accompanied by hemorrhage. (Churchill's *Midwivery*, p. 529.) This is far too sweeping a statement. It evidently contemplates the possibility of the accident only as a sequence of parturition; yet even here we can readily conceive of the possibility of air obtaining entrance into the uterine veins during the progress of the normal contractions, when little or no blood need escape. Indeed, we must conclude with Simpson, that it is by means of these very contractions that, in many cases, air is driven into the vessels. Facts corroborate this view; for we see by the cases reported, that hemorrhage is by no means a constant accompaniment of the accident, and that where it has occurred, it has apparently been far from profuse. This coincides with the remark of Wattman, and with the experience of the commission, that want of bleeding from the opened vein is a prominent sign of the accident. To the question, How comes the air into the uterine cavity? Dr. Churchill answers: "It may penetrate, doubtless, during the process of expulsion of the child, or during the interval before the expulsion of the placenta, or it may be the result of decomposition. That air is expelled from the uterus occasionally, during or immediately after labor, we know; so that we may conclude with Dr. Cormack: 'I have not only no difficulty in believing, but am constrained to admit, that should

any impediment be offered, in such cases, to the free exit of air by the os uteri, it must be forced into the uterine veins, were their mouths not protected by coagula.'" (*Id.*) M. Amussat thinks that the phenomena of the introduction of air into the uterine veins may be explained by the same mechanism as for the dangerous region, *i. e.*, by the respiratory movements which are transmitted even to the uterus by the flux and reflux of the intestines; and hence if the uterus does not contract, and if the vessels of its walls remain patulous, we can conceive that aspiration of air may take place as at the neck, though doubtless less easily. (*Op. Cit.*, p. 245.)

The proximate cause of death has been a subject of much controversy, and it has not yet been explained beyond a doubt. Morgagni states, and appears to accept, the opinion of most of the earlier physiologists, that death occurs from the great distension of the walls of the heart, which was likened to over-distension of the bladder with urine; though he suggests the possibility of apoplexy, in some cases, from the effect of air in the vessels of the brain. (*Op. cit.*, secs. 23, 24.) Bichat also believes that the air becomes mortal on arriving at the brain, but how it operates upon this organ to produce death, he considers not worth investigating. "*Qu'importe le comment?*" he asks, "*le fait seul nous interesse.*" (*Op. cit.*) Nysten reasserted the opinion of the earlier experimenters, that death, in the rapidly fatal cases, was due to over-distension of the right cavities of the heart, which he believed occasioned such a dragging of the fibres of the left ventricle as to oppose the free exercise of its contractility; though, in those cases where the fatal issue was delayed, he acknowledged that its cause was in the lungs. (*Op. cit.*, p. 166.) Magendie, Dupuytren, and others accepted this view. (MERCIER, *Gaz. Méd.*, 1837, p. 485.) MM. Piedagnel and Leroy thought that the air forced into the lungs by the contractions of the right ventricle, and suddenly expanded by the change of temperature, ruptured the pulmonary capillaries, and produced emphysema, and thus stoppage of the circulation. (MERCIER, *op. cit.*, 1837, p. 484.) M. Ollivier accepted this theory as probable in the more prolonged cases, but preferred that of Nysten for the instances where death was sudden, suggesting the probable rarefaction of air in the heart as the occasion of over-distension. (*Op. cit.*, p. 71.) M. Amussat seems to have held a similar opinion. (*Op. cit.*, p. 240.) M. Marechal de Calvi thought that carbonic acid was disengaged from the

blood by the oxygen of the air mixed with it, and that this operated as a poison upon the heart. (ERICHSEN, *op. cit.*, p. 4.)

M. Mercier names, 1st, stasis of the venous blood, from the inability of the heart to propel so elastic a fluid as air; 2d, interruption of the arterial circulation from the same cause, combined with the frothiness of the blood in the pulmonary capillaries; while, 3dly, the pressure of air in the arterial system may give the last blow to the organs already enfeebled by the privation of their natural excitant. (*Gaz. Méd.*, p. 485, 1837.)

M. Denot assigns as the cause, accumulation of air in the right cavities of the heart, consequent upon inability of the auriculo-ventricular valve to prevent the reflux of air from the ventricle into the auricle. (*Id.*, p. 728.) Sir Charles Bell believes that air interferes with the functions of animal life, by entering the vessels of the medulla oblongata. (*Op. cit.*) Dr. Wing asks: "Can we not suppose that the air impairs the power of circulation, 1st, by distending the heart with its own volume; and, 2dly, by causing an imperfect closure of the valves, and thus permitting a reflux of blood at each contraction of the ventricle, which causes, in its turn, an increased disturbance, until it goes beyond the power of reaction to overcome." (*Loc. cit.*)

Professor Wattman's theory is, progressive decrease in the activity of the heart, and of its influence upon the circulation, in consequence of the sudden over-distension of the venous system by the mixture of blood and air; the insufficient oxidation and decarbonization of the blood in the lungs, with simultaneous and equal decrease in, and impediment to, its electro-magnetic influence; the diminution of the exciting and nutritive qualities of the blood, and its consequent diminished capacity to maintain the function of those parts of the brain, spinal marrow, lungs, and heart, the united action of which are essential to life. (*Am. Jour. Med. Sci.*, vol. 9, N. S., p. 170.)

M. Bouillaud assigns a threefold cause. 1st. Distension of the right cavities of the heart, impeding its contractions. 2d. Spumous blood in the branches of the pulmonary artery preventing the free passage of blood through the lungs. 3d. Entrance of air into the vessels of the brain causing compression of that organ. (*Op. cit.*) Dr. Cormack attaches importance only to the first of these reasons, Reid to the first and second conjoined, while others, among whom are Poisseuille (*Gaz. Méd.*, 1837, p. 671), Erichsen (*op. cit.*, p. 15), Bernard (*Des*

Substances Toxiques et Médicamenteuses, p. 163), and Dalton (*op. cit.*, p. 510), are content with the second of these alone.

We have thus gone over with the principal theories offered to account for the fatality attending the accident. Our limits will not permit us to discuss them, though there is not one which does not seem open to objections more or less weighty. Those referring death to the presence of air in the brain or spinal cord, or to emphysema of the lungs, are disproved by the result of dissection in a large majority of cases.

Against the theory of poisoning from the elimination of carbonic acid, are adduced the experiments of Nysten, which show that the injection of that gas is even less injurious than air, being more readily soluble. (*Op. cit.*, p. 81.) Against the theories indicating obstruction at the heart, it is urged that that organ is often seen contracting after the respiration has ceased, and that it is by no means always found distended. (*Erichsen*, p. 10.) Finally, it is objected against the theory of obstruction of the lungs by frothy blood, that the sudden injection of an equal volume of water produced the same effect as air. (*Br. and For. Med. Rev.*, vol. xxv., p. 462.) While we believe that the disturbances produced in the economy by the presence of the foreign element are as complex as are the relations of interdependence between the different organs and functions of the body, and cannot be satisfactorily explained in the present imperfect state of our knowledge of these relations, we admit that the weight of evidence indicates that one of the chief troubles is the impediment offered to the passage of blood through the lungs. It should be remarked, however, that the symptoms produced may be all referred to disordered nerve influence, so that whatever mechanical conditions combine to strike the blow, or on whatever link or series of links of the vital chain it falls first or chiefest, it must be felt by the cerebral centres before any response becomes manifest.

We are now prepared to give an opinion on the practical question referred to at the beginning, viz., as to the nature and amount of evidence necessary to prove that a given case of death was due to this cause; and we reply, in general terms, that a sudden death taking place under any of the circumstances shown to be favorable to the occurrence of this accident, and not adequately and satisfactorily accounted for in any other way, affords strong presumptive evidence in favor of this as the cause; that if in addition the case presents certain of the prominent symptoms which we have remarked,

such as violent disturbance of the respiratory and cardiac movements, great prostration, or convulsive spasms, and especially if the hissing sound indicating the entrance of air, or the churning sound, significant of its presence in the heart, is heard at the same time, the fact may be considered as established without the additional evidence of a *post mortem* examination, which should nevertheless be always obtained, if possible, that the proof may be rendered unexceptionable, as well as for the scientific interest attaching to it. At the same time we cannot too strongly urge the importance of accurately noting the minutest details, as far as this can be done, without sparing every possible effort for the relief of the distressing symptoms. Above all, auscultation of the heart should never be omitted. In conducting an autopsy in a suspected case, the length of time which had elapsed since death should be noticed, together with the temperature, whether warm or cold, both of the body itself and of the atmosphere in which it had been kept, and the general condition of the body as to cadaveric changes. The calvarium should not be removed until after the heart is examined, and great care should be taken in opening the thorax not to wound any considerable vein. As a precaution against this, it would be better to saw the sternum through, than to disarticulate it from the clavicle. The contents of the heart, and of such of the larger vessels as give evidence of the presence of air, should be evacuated under water, notice being taken whether the air, if any issues, comes to the surface in a single wave, or in a multitude of minute bubbles. The former would indicate that the air was present, unmixed with blood; the latter that it was mixed with that fluid, forming a froth. We should not, however, with Prof. Dalton (*op. cit.*, p. 517), make this a decisive diagnostic sign, indicating whether the air gained entrance during life or not, unless the autopsy took place immediately after death, which, of course, it seldom can; for a short time might suffice for the froth to subside, and the air to be extricated entirely from the blood, which was doubtless mixed with it by the action of the heart. The gas might be readily collected in an inverted beaker, and measured approximately, and in a case admitting of doubt as to whether the gas was atmospheric air or not, the rough analysis resorted to by Roux would suffice. After collecting the gas, he decided that it was not ammonia because it was insoluble in water; it was not carbonic acid, for it gave no precipitate with lime-water; a lighted bougie plunged in it burned with the same activity as in the sur-

rounding air, hence it was not nitrogen; neither was it oxygen, which would have given increased brilliancy to the flame, while hydrogen would have taken fire itself while extinguishing the taper. Thus, by the process of elimination he arrived at the conclusion that the gas found in the heart was atmospheric air. (MERCIER, *op. cit.*, p. 483.)

We now pass to a brief consideration of the remedial and preventive measures. As to the former the indications are—1st. To prevent further ingress of air. 2d. To remove from the heart and lungs, if possible, that already admitted. 3d. To sustain the vital organs in the performance of their functions.

The first indication can be promptly met in surgical cases; indeed Wattman places almost his whole reliance on the prompt application of the necessary measures for this end, asserting that, if attended to when the first signs of the accident are manifest, a fatal termination can always be avoided. When the lapping sound is heard, or any symptom pointing to the entrance of air is noticed, instantly desist from the operation and press the point of the index finger upon the spot whence the sound proceeds. Finish the operation without removing the finger. If the hand is in the way, let the finger of another hand be placed upon the vein between the wound and the heart, until the first finger is slid along the vein to the necessary distance. As soon as possible, permanent closure is to be obtained either by quickly uniting the lips of the wound, by ligature on the vein, by torsion, or by the lateral ligature, whichever of these methods seems most practicable, from the nature of the incision, the relation of the vessel to the surrounding parts, and its size and importance. The lateral ligature is claimed by Wattman as peculiar to himself, and we must refer the reader to his work, or the reviews already quoted for an account of it. Its application is to large veins wounded through only a portion of their diameter, and it is intended to close the orifice without obliterating the calibre of the vessel. Ferguson thinks there would be danger of exciting inflammation in the vein by this method, and that simple closure of the wound with a little pressure would be preferable. (FERGUSON'S *Surgery*, p. 630.) The prompt application of compression, has apparently been the means of saving life in many of the cases reported, among others in one of those of Dr. Warren, and in the late one of Dr. Clark; but, of course it is inapplicable to cases where the uterus is the source of the accident, and it must be confessed that little can be done in

those cases under the first indication. If a clot or other obstruction exist in the cervix uteri or vagina, it should be speedily removed.

Under the second indication, the most important measure is probably artificial respiration, which, by keeping up the action of the heart, may lead to the propulsion of the spumous blood through the pulmonary capillaries. Amussat and Blandin recommend suction by means of a tube passed through the wounded vein, or the right jugular, into the auricle, combining this with pressure on the chest. Magendie and Rouchoux advise suction alone, and Gerdy, simple compression. The objections to suction are the danger of admitting more air, and of injuring the inner walls of the vessels or heart, and we do not know that it has ever been practiced. M. Amussat ascribed recovery in the case already mentioned reported by him, to pressure which he employed upon the chest, at the same time leaving the opening free. The patient should be so placed that the opening in the vessel shall be directed upwards, and be on a somewhat higher level than the heart. The pressure should be made to alternate with relaxation, and care should be taken during the intervals to close the orifice of the vein.

To meet the third indication artificial respiration is also required, together with the administration of brandy and diffusible stimulants. Various other measures of more or less value have been recommended; among these the recumbent position and pressure on the abdominal aorta or iliac arteries, both of which means promote the afflux of arterial blood to the brain, and thus help to sustain it in the exercise of its functions. If there are signs of great venous congestion, bleeding at the right jugular vein, care being still taken to avoid the further entrance of air, may at once relieve the brain and the right side of the heart of excess of venous blood. For the rest, the usual remedies applied in ordinary syncope should be invoked, such as aspersion with cold water, the application of ammonia to the nostrils, and warmth to the extremities. Dr. Cormack recommends the alternate use of hot and cold douches combined with stimulants, in those cases which threaten asphyxia. "In many instances," he says, "repose, dashing cold water in the face, keeping the surface warm, and time may be the only means which ought to be used." (Churchill, *op. cit.*, p. 531.) If the immediate danger is averted, care is to be taken against the supervention of inflammation in the lungs.

The preventive measures consist simply in avoiding as far as possible all the known conditions which favor its occurrence.

In most of the cases the means of avoidance suggest themselves at once in connection with the danger. A few measures require particular mention. Erichsen recommends with Gerdy enveloping the chest in tight flannel bandages to prevent the deep, gasping inspirations which favor the ingress of air. This has been objected to on the ground that respiration would be too much interfered with, while the admission of air would not be prevented; but aside from this, the now universal use of anæsthetics during surgical operations renders the respiration sufficiently regular by controlling the emotional influences which would otherwise disturb it. On the other hand compression of the hypogastrium after delivery, by means of a bandage around the abdomen, as advised by M. Amussat (*op. cit.*, p. 245), seems a judicious prophylactic measure. He also recommends that the thighs be kept approximated. M. Dupuytren counselled that, in the removal of tumors in the dangerous region, they should be divided into several portions by crucial incisions, and thus removed piecemeal, to avoid the traction necessary in dissecting them whole from the adjacent tissues, and M. Graedemur has taken a similar precaution since the occurrence of the accident under his hands. (*Am. Journ. Med. Sci.*, July, 1842.) M. Blandin also advocates this plan of crucial incisions, and in addition, in view of the fact that the accident seems to be more uniformly fatal when occurring towards the close of an operation wherein considerable blood has been lost, proposes that the extirpation of tumors be commenced at the part most exposed to the access of air, instead of leaving that until the last, as is usual. (*Gaz. Médicale*, 1843, p. 51.) Compression of the large veins between the seat of operation and the heart has been recommended, but would often be objectionable from causing turgidity of the vessels. For the rest, a full knowledge of the conditions favoring the entrance of air into the veins, and the keeping that knowledge in mind during all operations and in the care of all cases in which there is a possibility of danger; these are the best safeguards against it.

In the imperfect sketch which we have now given of this important subject, we have endeavored to give especial prominence to its practical aspect. We have not taken up single cases and analyzed the evidence for and against each; having neither space nor disposition to do this, but preferring to admit at the outset, that every case cited, while it adds something of value to the whole mass of evidence, is of itself imperfect; but we have presented an array of facts and authorities which

taken as a whole, must, we think, convince any candid mind that fatal accidents have occurred, and may again occur, in all of the ways which those cases illustrate. By giving a *résumé* of the cases already known, with an account of the conditions under which they occurred, by indicating other circumstances under which there is more or less reason to apprehend danger, and by citing instances of an analogous class of cases which it is practically desirable to distinguish from these, we have hoped to aid the practitioner to deal intelligently with any case of the kind which he may have the misfortune to encounter, and therefore have been content to pass over very briefly the medico-legal and therapeutic aspects of the subject. In conclusion, we commend the matter to the attention of the practical men of the medical profession, whatever their specialty, feeling confident that it is well worth the trouble of further investigation,

EDITORIAL CORRESPONDENCE.

WASHINGTON, Feb. 16, 1864.

Notwithstanding this city is so well known, some things relative to it may not be devoid of interest to the readers of the JOURNAL. In general terms, I must say, I am much and unpleasantly disappointed in it. Its site has nothing to recommend it. It stands in a basin, surrounded by hills of slight elevation. It is reached only at great inconvenience, and has no business or commercial importance. It can be defended from a foreign or domestic foe only at great expense and effort, and it seems to me that when the war is over, and we are a united and peaceful people once more, the question will force itself on the public mind—where is the proper place for the capital of the nation? The public buildings—erected at great cost—are scattered over the city in such a way as to detract much from their influence on the mind, and the private edifices are very poor, and form with these, an unpleasant contrast.

There are some objects of interest here, among which is the Smithsonion Institute, founded by a munificent bequest made to our government by an Englishman,—James Smithson,—his avowed object being the dissemination of knowledge among men. In making this disposition of his wealth, he exhibited much of true wisdom, and placed his name where it will become more and more conspicuous, as those of the great body of his cotemporaries that now surround him shall one after another fall into oblivion. It is especially designed to give opportunities for scientific investigation, and what it has accomplished in this way under the supervision of Prof. Henry is well known to the public. It has an extensive library—its museum contains an interesting collection of prepared birds and animals—of shells and geological specimens —and also curiosities of different savage tribes, that illustrate strikingly the stages of their progress in civilization. It has, too, some works of art—a collection of Indian portraits, and 'tis to be hoped this may soon be the only reminder we have left of this worthless race. There are some heads in plaster—Cuvier's the only noticeable one—it is grand—the finest configuration I ever looked upon. There are a number, not yet dead, who will only live in clay, who have taken the precaution to place their names on the pedestals, that there may be no mistake. There is a pedestal for Pierce, but the bust is gone—translated, no doubt. I have long thought he stood in danger of this accident. The Washington monument is a sad affair. At a distance it reminds me of a kiln for the manufacture of pottery. It is unfinished, and is likely to remain so—for though contributions continue to be taken for it, it is not supposed they much more than cover incidental expenses. I should not think the view from it would ever be pleasant, and with its present surroundings, it is dismal enough. It is now in the midst of a great cattle yard, and around its base I saw one or two hundred government cattle—ordained victims for the shambles, and near it are racks for feeding, sheds for sheltering the hay, a long low building filled with quarters of beef,

and standing around it army wagons to convey it as needed to the camps. In a building resembling this, I found the stones sent by different nations, States, and associations, to be inserted in the monument. The inscriptions on some interested me. For example: "The State of Louisiana, ever faithful to the Constitution and Union," Let us hope this may soon not be inappropriate. Another seceding State has adopted the language of Jackson: "The Federal Union, it must be preserved." The American Medical Association has a contribution, with a design suggested by Davids' painting representing Hippocrates spurning the gold offered by Xerxes, if he would desert his own people and engage in the service of the king. The design is rendered peculiarly happy from the contempt in which the profession has always been known to hold money. In the figure, the hand with which he was motioning them back has been broken off—doubtless by some faithless wretch, who feared that professional virtue might not be always proof against the temptation, and that the treasure might be grasped.

There is nothing in Washington so interesting to the physician as the collection instituted by the Surgeon General—Dr. Hammond—designed to illustrate the medical and surgical history of the rebellion. At the last session, Congress appropriated $5,000 in aid of the undertaking, and double this sum is asked of the present, and I doubt not there is enough of enlightened wisdom in this body to secure the money. So far as I know, it is the first instance in which the general government has done anything to aid the profession, to which, especially in the present war, it is so much indebted. The museum contains about 5,000 preparations, both wet and dry. The osteological specimens show every conceivable injury liable to occur from the accidents of war, and passing through all the stages from recent injury to long protracted efforts at repair. They are beautifully mounted, and the collection is said, by those of extensive foreign travel, to be, in regard to recent injuries, superior to any in the world. The

proportion of specimens where union has taken place is small, for such patients have recovered without amputation, and cannot yet spare their limbs for exhibition. The wet preparations include many beautiful specimens of intestinal disease, so common in the army—showing every stage and grade of ulceration, perforation, enlarged follicles, &c.,—also, scorbutic ulcers of the mouth and throat, extensive diphtheritic membranes, hospital gangrene, and other objects of interest that I cannot enumerate. Excellent drawings of pathological conditions are being executed in water colors, designed to furnish the plates for the medical and surgical history of the war, that the Surgeon General intends to publish. A large number of microscopic preparations, both pathological and physiological, are already made, and are every day being increased.

Previous to this time, we have always looked abroad for exhibitions of the highest perfection in this art—but already, the skill which is the fruit of constant practice has enabled us to equal the best efforts of the old world. There is also a laboratory in which the purity of samples of medicines furnished to the government are tested, and in the medical department we have to give thanks that the days of "shoddy" are past.

A series of observations are now being instituted, with a view of finding out, if possible, the occult causes, atmospheric or otherwise, which tend to the propagation of diseases most common in hospitals. This work is being carried on under the supervision of the Surgeon General, by Drs. Brinton and Woodward, and it could hardly be placed in better hands. They possess the requisite attainments, and pursue their labors with the ardor inspired by the love of scientific investigation. It is to be hoped nothing may interrupt their work, and that from their labors we may preserve something to medicine and surgery of the rich experience of the war.

I think the profession, and the army are under obligation to Dr. Hammond for what he has done as Surgeon General. His position has been one of exceeding difficulty. No man in this

place could avoid giving offence to many,—and especially would this be true, if he performed the duties of his station well. All who find themselves thwarted in their designs on the public, will curse the obstacle that stands in their way, and he who disturbs traditionary usages, however unreasonable, will surely be anathematized, and I suspect that when Gabriel summons the elect to the fruition promised as the reward of their virtues, the half of them will lose their temper at his disturbance of their slumbers.

Our peace establishment for the medical department hardly furnished a nucleus for what is demanded by this gigantic war. The Surgeon-General had everything to organize and supply, and the sanitary condition of the army attests how well he has performed this task. I think him particularly well fitted for his place at the head of the Medical Bureau. His scientific acquirements and practical professional ability are well known, but he superadds to these executive capacity, pride in the profession, a jealous watchfulness over its honor and interests, and an enterprise and activity in carrying out his designs, quite shocking to dull and slow routinists. His lack of subserviency to non-professional men, who so often think they know better than the members of the profession about medical matters, has given offence to some. The attacks on him have been pressed with vigor, and long continued, and his position has been made as unpleasant as possible, perhaps with the hope that he might be thus made to resign. I have long thought there was a systematic attempt being made to prejudice him in the public mind, by the use of the telegraph, and in this way during the last four months, we have had him, over and over again, court-martialed, suspended from duty, or dismissed from the service. For some cause he finds in the Secretary of War a very bitter enemy, who treated him in such a manner as to compel Dr. Hammond to ask a court-martial to inquire into his official conduct, which favor was obtained only after more than one request, and not until the appeal had been made to the well-known sentiments of justice of the President himself. No efforts will be spared

by Mr. Stanton to be rid of Dr. Hammond. The court is now in session in this city, is composed of nine members, and is presided over by Maj. Gen. Oglesby of Ill. He is the only one of whom I have much knowledge, but the people of Illinois know that he is beyond the reach of political or personal influences, and would do intentional injustice to no man.

I designed my letter to be brief, but fear it has grown to an unpardonable length. E. I——.

☞ We owe an apology to many friends for not returning receipts promptly for money received on subscriptions. The delay has been unavoidable, but we hope to correct it with the April issue.

BOOK NOTICES AND REVIEWS.

The Nervous and Vascular Connection between the Mother and Fœtus in Utero. By John O'Reilly, M. D., F. R. C. S., I. New York: Printed by Robert Craighead, 1864.

From believing that the ever varying mental conditions of the Mother, exercise a direct and controlling influence upon the nutrition and development of the Fœtus in Utero, and thus affording an explanation of the presence of "Marks" upon the surface, and abnormal developments of the various parts of the body of the Child, so frequently seen, the Profession passed to the other extreme, and held that these occurrences were accidental and entirely inexplicable. Now again the Physiologist is directing the Medical mind back, and by the advance in Anatomical and Physiological knowledge of the present day, endeavors to furnish the rationale of the occasion of these irregularities. Speaking of the influence of the maternal imagination in causing deformities and marks in the Fœtus, Dunglison says, "As a cause, therefore, the influence of the maternal imagination has been generally regarded as an inadmissible hypothesis. By many it has been esteemed ridiculous." *Phys., 2d Ed.*, 1836. A late and popular work expresses the opposite opinion in the following language: "There is now little room for doubt that various deformities

and deficiencies of the Fœtus, conformably with the popular belief, do really originate in certain cases from nervous impressions, such as disgust, fear, or anger, experienced by the Mother." *Dalton's Physiology.*

This pendulum movement of the Medical mind upon this subject, the author endeavors to bring to an equipoise, in the morceau before us, the latest addition to the literature upon the topic—the perusal of which has afforded us much pleasure. The subject is treated somewhat in the following order:—1st. That motion and pain are connected with the presence of nerves. 2d. That impressions made upon the cerebro-spinal system, are communicated and extend to the organic nervous system, through the inosculation of the nerves of the former with those of the latter. 3d. The following question is proposed, Is there a nervous connection between the Mother and Fœtus in Utero?

"It is a question, too, which has baffled the greatest Anatomists and Physiologists of the past and present generation to solve. Evidence of the truth of a connexion existing between the mother and fœtus in utero is continually presented, and, although the *vox populi* affirms the truth of such a connexion, judging from facts and the evidence of the senses, yet, strange to say, the medical profession has failed to give a satisfactory account of the phenomena presented in it, and ignores as well as repudiates the idea of there being any nervous connexion between the mother and fœtus in utero.

* * * * * * *

Mr. Quain says: "Now, as to the *sympathetic* nerve, so far from being in any way derived from the brain or spinal cord, it is produced independently of either, and *exists* notwithstanding the *absence of both.* It is found perfectly *formed* in *acephalous* infants, therefore *does not arise*, mediately or immediately, from the *brain;* neither can it be said to *receive roots* from the *spinal cord*, for it is known to exist *as early* in the fœtal state as *the cord* itself, and be fully *developed* even though the latter is *altogether* wanting. It appears that whilst the organs of vegetation and life are being formed, the sympathetic nerves are *produced concurrently* with them; and that as the growth of these proceeds from the *circumference* to the centre of the whole body, from its lateral parts to the median line, the *sympathetic nerves* also *conform* to the general law."—See Quain's *Elements of Anatomy*, p. 711.

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Mr. Harrison, the celebrated anatomist, says, in speaking of the organic nerves which surround the aorta, "the latter accompany the common iliac artery to their division, and several filaments are prolonged around the internal and external iliac vessels."

These organic nerves are prolonged from the internal iliac artery along the umbilical arteries to the placenta, there inosculates with the corresponding class of nerves, which surround the uterine arteries.

4th. That there is a *direct* vascular connection between the mother and fœtus is *inferred*, from the *assumed* analogy between the placenta and liver—each organ having four sets of vessels appropriated to corresponding offices.

The circulation in these several vessels of the placenta, during gestation is manifestly powerfully affected by various states of the mind, by accident, etc. Proof—Hearing unexpected intelligence of an exciting character, produces abortion.

"Here the impression is conveyed from the filaments of the auditory nerve to the brain, spinal cord, sacral ganglia, connected with the roots of the spinal nerves, the hypogastric plexus, the nerves surrounding the arteries, distributed to the uterus, causing contraction of the muscular fibres of this organ and followed by the expulsion of the *ovum*."

Various circumstances may impress the nervous centres of the mother, be transmitted to the fœtus, occasion irregularity in the circulation of a part and defective nutrition, and thus produce nevi and deformities. The author's views are clearly stated—his arguments, if not demonstrative, are at least ingenious, his conclusions logical—and will well repay the time devoted to their study. Many cases are collated to illustrate the positions taken—none of which are more remarkable than an instance occurring in the practice of Prof. Miller, of Rush Medical College:

Mrs. W., in her third pregnancy, while passing to different parts of the city in following her vocation, ladies hair dressing, frequently met an individual in the streets, who was considerably deformed, and was severely affected with Chorea. The

sight of this individual, with his fantastic and purposeless movements, his idiotic countenance, and distortion of body, produced a strong and repulsive impression upon her mind, so that she frequently expressed the fear that the effect would be unfavorable to the perfect development of her child. During the *progress of the labor* she manifested her anxiety upon this point. The labor, which took place March 26, 1863, was natural. The child, a female of the ordinary size, lived for a few minutes, and presented the following peculiarities:

On the back part of the head was a tumor the size of a large orange. It had hare-lip and cleft palate. The inferior extremities were of unequal length; both feet turned inwards (talipes varus); on each foot were six toes; on each hand five *fingers*. The specimen is preserved in the Museum of Rush Medical College.

St. Louis Medical and Surgical Journal.—Bi-Monthly. Edited by Profs. M. L. Linton, M. D., and F. W. White, A. M., M. D. New Series, Vol. 1., No. 1. Terms, $3,00 per annum.

After an absence of three years this valuable Medical Journal has again made its appearance on our table, looking as bright and neat as it was wont to do of yore. And its pages are so well filled with valuable matter that it will lose nothing by a comparison with its former self, or any other Journal in the country.

We congratulate the Editors on the favorable auspices under which they renew their editorial labors, and cordially welcome the *St. Louis Med. and Surg. Journal* to our exchange list.

Notices Deferred.—From want of space in the present number we are compelled to defer till our next issue, suitable notices of the following works:

On Asthma, Its Pathology and Treatment. By Henry Hyde Salter, M. D., F R. S, Fellow of the Royal College of Physicians, Assistant Physician to Charing Cross Hospital, and Lecturer on Physiology and Pathology at the Charing Cross Hospital Medical School. Philadelphia: Blanchard & Lea. 1861.

Parish's Practical Pharmacy. 3d Edition. By the same Publishers.

Ellis' Medical Formulary. New Edition.

Dalton's Treatise on Human Physiology. 3d Edition. By the same Publishers.

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ORIGINAL COMMUNICATIONS.

RAMBLES IN MILITARY HOSPITALS.

PRISON HOSPITAL, ROCK ISLAND, ILL.

By R. M. LACKEY, M. D., A. A. Surg., U. S. A.

After a twelvemonth's rest, I once again resume my "Rambles," and this time I greet you from a different latitude from that in which I made my last excursion. This time I am not in Dixie, but where quite a large number of her deluded sons find a temporary abiding place.

The island upon which this prison is located, and long known as Rock Island, is situated in the Mississippi River, in latitude, north, about 40 degrees. Opposite the lower end of the island is the city of Rock Island, on the Illinois side, and Davenport on the Iowa side of the river. The island is high, and the surface rolling; the soil sandy, with gravelly, rocky subsoil. A large portion of it is covered with a growth of fine young timber, the larger timber having been nearly all cut off. The island contains about 1000 acres, nearly all of it belonging to Uncle Sam.

The only buildings of much importance on the island, except those erected recently by the government, are those built by Col. Davenport in 1839. The dwelling house in which he was murdered is a commodious, substantial frame building, and is now occupied by the Post Commandant, Col. Johnston, as his headquarters.

The barracks are built on a ridge running parallel with the river, near the bank on the north side of the island. The buildings are like those usually erected for such purposes, they have been hastily put up, and of green, wet lumber, so that after a few days' seasoning, the ventilation is ample.

There is excellent opportunity for drainage, but, unfortunately, from want of a little skill and foresight, or rather, I should say, for want of common sense in planning, there is not much gained by draining, as the engine and reservoir by means of which the place is supplied with water from the river, is placed below where the filth runs into the river, thus rendering the water used quite impure. But it is the medical department about which I desire to write more especially. The hospital was first organized by Dr. Thos. J. Ilis, of Davenport, Nov. 14th, 1863. There was then only four companies of the Invalid Corps here, but soon after 1,500 prisoners arrived, and of this number 10 per cent. were sick and subjects for hospital. No hospital had been erected, and a sufficient number of the barracks were appropriated for hospital purposes. Most of these men were sick with colds and pneumonia, contracted on the trip northward; they were poorly clad, and had been for a long time, probably, poorly fed, and consequently had but little stamina to resist the effects of cold. There was 327 sick prisoners admitted into hospital from Dec. 6th to Dec. 20th, 1863, and according to the record kept, there was of this number 189 sick with pneumonia. The others were mainly old cases of diarrhœa, debility, and acute rheumatism. The number of deaths during that time was 38, and of these 32 died of pneumonia, and only 6 from other diseases. It will be seen that the cases of pneumonia were

of a severe grade, for of the whole number admitted to hospital about 97 per cent. died of this disease alone, and of the whole number of cases about 17 per cent., and undoubtedly quite a number of those admitted during that time with pneumonia, died subsequently.

There is not so large a proportion of pneumonia cases now as previously, when there were more fresh arrivals of prisoners; those that do occur are mostly among those newly arrived. It is scarcely necessary for me to speak of the treatment pursued in these cases, as it is evident to every intelligent medical man, that it must be mainly supporting, by the admininistration of tonics, stimulants, and nourishment; these will not bear sedatives or depletion in scarcely any case.

The cases of rheumatism are usually treated with palliatives, a Dover's powder, 10 grs., at bed-time, and stimulating and anodyne liniments locally.

Variola is now the predominationg disease among the prisoners. There are at this time 771 patients in the prison hospital, and fully one-half this number are in the pest-house. There are a few cases of Camp Fever, and but few in proportion to the large number of men that are crowded together, and many of them exceedingly filthy in their habits. There is a strong tendency to erysipelas and hospital gangrene, so that the few cases of wounds that we have are exceedingly troublesome. The slightest abrasion of the skin often results in a dangerous erysipelatous inflammation.

Iodine is the remedy most used as a local application, and I am more than ever convinced that there is nothing better now in use; even in the so-called "hospital gangrene," I prefer it to Bromine. When a suppurating surface presents that condition we call "gangrenous," I at once apply a strong solution or the officinal Tinct. of Iodine, twice a day, and usually after a few applications I have the satisfaction of seeing the wound assume a healthy appearance, and Bromine can do nothing more.

There are between 8, and 9,000 prisoners here, and up to

this time, there has been about 1,900 sent to the hospital, and the whole number of deaths has been about 575. This shows a fearful rate of mortality, for the number of hospital cases.

Small Pox appeared among the prisoners first about the 1st of Jan., 1864. The disease was brought here by a lot of prisoners from Tenn., some of whom had been exposed to the contagion. From the first, the disease made rapid progress notwithstanding the medical officers made every effort in their power to stay its ravages. They insisted on the necessity of isolating the cases as they occurred, and protested against any more prisoners being sent here until the disease abated. But it was in vain in this, as in many other cases, for medical officers to try to accomplish anything without the co-operation of other officers.

It was some time before buildings were erected for a "pest-house," and even now with about 400 cases of small pox, there is only hospital accommodations for about 200, in a proper locality, and fresh installments of prisoners are arriving almost daily, and as a consequence the disease is fearfully on the increase. The mortality is proportionately greater now than when the disease first appeared, showing that from concentration of a large number of cases the virulence of the disease is increased.

A large amount of the "Saracenia purpura" has been used in the treatment of small pox here, and so far it has failed to have the beneficial effects that it is said to produce in variola. It is being fairly tested here, and it is hoped that it may prove efficacious. There is but little sickness in the garrison at present; a few cases, only, of small pox have occurred amongst our own men. But I have rambled far enough for once.

ON THE TREATMENT OF EMPYEMA BY CHASSIGNAC'S DRAINAGE TUBE.

By W. D. SLATER, M. D., of Chicago;

Graduate of Royal College of Physicians of England; Royal College of Surgeons of London and Dublin; late House-Surgeon Westminster Hospital, London.

Empyema is, perhaps, one of the most fatal and distressing diseases which comes under the notice of the Physician, and one in which every plan of treatment too often fails to afford any permanent relief, consequently any treatment which may restore the patient to life as it were, and in many cases be the means of curing the disease is well worth the earnest consideration of the profession.

Some time since, M. Chassignac of Paris, undertook to treat Chronic Abscesses by means of what is called the India Rubber Drainage Tube, consisting of a long india rubber tube which had been pierced at short intervals by numerous small holes, large enough, however, to allow the pus freely to escape. The tube was passed completely through the Abscess in the same manner as an ordinary seton thread, and the ends tied together so as to prevent any air making its way into the cavity of the Abscess. This treatment was followed with such marked success, that it was determined to try it in cases of Empyema requiring operative interference, and the results, so far, have been very encouraging.

The simplest manner in which the tube is introduced is as follows:—A trochar and canula having been passed into the pleura from behind, and the trochar withdrawn, a long probe to which the tube has been tied, is passed through the canula and forwards across the cavity of the pleura, and brought out between the ribs in front, this then cut down upon and with-

drawn, together with the end of the tube. The canula is then taken out, and the ends of the tube tied together. Pus immediately commences to escape through the small openings in the tube and the air is effectually excluded.

The operation itself is simple and gives very little pain; the inconvenience and irritation from wearing the tube is slight and does not require any interference whatever. The exact place in which the operation should be performed depends altogether on circumstances, and the operator should be guided by the rules laid down for paracentesis thoracis.

The advantage of this treatment is, that by the constant draining off of the pus, and its not being allowed to again collect in the pleura in any quantity, the lung is allowed to expand and remain expanded, thereby relieving the patient very materially, and at the same time giving other remedies and general treatment a much better chance of success than by the ordinary method of tapping.

In conclusion I give the history of two cases, in which this operation was performed, during the term of my House-Surgency at the Westminster Hospital.

Wm. Day—aged 22, sailor, admitted into Westminster Hospital, December, 1861. It was stated by his friends that a short time previously, he had suffered from pleurisy of the left side. A medical man had been called in but as he continued to get worse daily he was brought to the Hospital.

On examination, the left side was found to be distended with fluid, great dullness on percussion, no respiratory murmur to be heard, great difficulty of respiration, puerile breathing on right side, heart pushed a little to the right side, action labored, sounds normal, pulse very small and weak, countenance pale, anxious, and distressed, and the patient was altogether very weak.

The usual remedies to promote absorption were immediately employed and plenty of stimulants given, but in vain, for he continued to get worse for three days, when, owing to the exhausted state of the patient and the extreme dyspnœa, it

was decided to tap the pleura, which was done on the fourth day from his admission. An exploring needle having been first introduced, nearly two pints of clear, healthy pus were drawn off. This operation relieved him very much, but in a few days the sac commenced to refill, when it was determined to try the drainage plan, which was accordingly done. The pus escaped freely through the openings in the tube; he was placed on a nourishing and stimulating diet; blisters and other remedies were employed. He continued rapidly to recover; the pus gradually ceased to flow, and in six weeks from the time of its introduction, the tube was withdrawn. In two weeks from that date he was discharged perfectly cured.

James Barrington—aged 36, engineer, admitted into Hospital May, 1861. Has been suffering from pleurisy, for which he had been attended, but becoming much worse, his friends brought him to the Hospital.

On admission he was found to be suffering from a considerable effusion into the left pleural sac. Nearly three-fourths of the lower part of the chest was dull on percussion and the respiratory murmur was inaudible, the upper third was clear, and a distinct respiratory murmur could be heard, breathing on the right side was puerile, heart sounds healthy, pulse very weak, countenance distressed and anxious, dyspnœa very great.

The usual remedies were employed, but as he did not get any better during the week, it was decided to try the drainage tube. This operation was performed.

For the first twelve hours, he remained in pretty much the same condition, but after that time, continued steadily but slowly to improve.

He was allowed plenty of stimulants and a nourishing diet, together with the usual remedies. After wearing the tube nearly five weeks, it was withdrawn, and between three and four weeks after, he was discharged cured.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE CORNEA—INJURIES.

The diseases of the cornea are too numerous and too important to be dismissed with but few remarks, and yet three lectures must limit what I design to say upon the subject.

I shall ask your attention, to-day, to the injuries of the cornea, and in the two following lectures shall speak of acute and chronic inflammation of this membrane.

The cornea is liable to several kinds of injury, which you should well understand. One of the most common is that, produced by the presence of minute foreign bodies, lodged either on its surface or in its deeper layers. Millers and machinists are especially liable to this accident; often receiving particles of stone or steel upon the cornea. These minute bodies are often readily removed, in fact mechanics not unfrequently acquire considerable skill in removing them from the eyes of their fellow workmen. Simple as it may appear, it requires some degree of delicacy and steadiness of manipulation to remove these little bodies from the cornea. It even requires some practice to detect them, especially if they are light-colored. But with good eye-sight, and with the habit of examining the surface of the cornea, you can scarcely ever fail to recognize their presence. They can, perhaps, be seen most readily if you stand behind the patient, seated before a window, and look obliquely upon the cornea from above. I usually remove them with the patient in the same position. If the particles are simply lodged on the surface, or in the epithelium, I generally make use of a slender piece of hard wood, with quite a fine and yet slightly blunted point. With one hand

the lids should be held apart, and with the other the point of the instrument should be carried gently against the particle, without scratching the cornea. If the foreign substance is deeply imbedded in the cornea, it is necessary to use some steel instrument, like a cataract needle with the point slightly dulled. It is surprising with what firmness the elastic tissue of the cornea grasps these little particles. Although the point of the instrument will readily lift some of them from their place, others can only be removed by repeated efforts—in fact they must be loosened on all sides—enucleated, as it were, before they can be dislodged. I have seen the most experienced oculists manipulate for more than a minute and not succeed in removing a piece of steel, imbedded in the cornea. Few patients possess sufficient fortitude to sit quietly through such an operation.

You will, therefore, generally remove particles deeply imbedded in the cornea, with less danger of injuring the eye, if you place the patient under the influence of chloroform. You then have perfect control of the eye.

Although I think it unnecessary to scrape the little wounds after removing pieces of iron or steel, for the purpose of clearing away the oxide that may remain, you should be aware that a steel instrument will sometime fracture a particle of cast iron or other hard substance. Care should be taken that every minute piece is taken away.

In very rare cases, where the particle is deep in the cornea, it may be advisable, first, to pass the point of a sharp lancet obliquely under the object. In this way the efforts to remove it with a cataract needle will be less liable to crowd the particle into the anterior chamber.

Occasionally you will meet with a case, where the fragment of metal or other hard substance has been thrown with such violence as to be forced through the cornea into the anterior chamber. The presence of such a substance in contact with the iris is very liable to produce troublesome iritis. It should be removed at once, by means of a fine pair of forceps, passed

through an opening near the periphery of the cornea. If this cannot be accomplished without danger of bruising the iris, I think the piece of iris to which the foreign body is attached should be removed with the particle, as in the operation for artificial pupil, which I shall describe at some future time. I may here state, however, that the evulsion of a piece of the iris is less liable to cause iritis, than either the contusion of some of its fibres, or the presence of a minute foreign body upon its surface.

After the removal of bodies from the surface of the cornea little treatment is usually required. Rest, with the application of compresses, wet in cold water, is sufficient. It is surprising how rapidly these little wounds of the cornea generally heal. Sometimes, however, they do not heal readily, but become chronic ulcers. I shall hereafter allude to the treatment of such cases.

There is a class of accidents, which I have almost invariably found in the practice of others, and in my own experience to be exceedingly grave. I refer to severe burns, whether produced by boiling liquids, pieces of hot metal, caustic acids, or alkalies. The portion of the cornea in which the vitality is totally destroyed soon sloughs. The portions around this in a short time become the seat of a very severe inflammation which extends to the conjunctiva, and is accompanied with a muco-purulent discharge. Even where the burn is quite limited in extent, the cornea is often destroyed by the subsequent inflammation. One of the first symptoms of this inflammation is a loss of transparency, which becomes more and more marked, till a part or even the whole of the cornea becomes opaque. The cells thus modified are very apt to die, either slowly, as in ulceration, or rapidly, as in sloughing.

The prognosis in these cases, even when for a time apparently of little importance, should be cautiously given. The destructive inflammation may extend to other important parts of the eye, absolutely destroying vision, or the least that may be feared, it may be confined to the cornea, leaving an opacity encroaching more or less extensively over the pupil.

On being called to these cases, it should be your first care to remove all irritating substances from the eyes. This can be accomplished by a constant but gentle stream of cool water thrown between the lids. A solution of sugar and water is said to dissolve lime more readily than clear water. All foreign particles, like sand, ashes, or cinders, must be carefully removed. Few patients can bear the pain of thorough examination and cleansing of the eye in cases of burns, unless under the influence of chloroform. It is consequently always advisable to make use of this agent in the examination of those cases. Subsequent pain should be controlled by the use of anodynes internally, and cold compresses locally. Sometimes a couple of drops of a solution of neutral sulphate of atropine —grs. iv to the ounce—instilled between the lids every hour, will relieve pain. A few drops of pure castor oil, or olive oil, introduced in the same way, are soothing to the eyes, especially when particles of caustic remain under the lids. After the slough produced by the burn has been cast off, and inflammation well established, the muco-purulent discharge which attends it should be checked by the careful use of a solution of nitrate of silver, varying in strength from two to six grains to the ounce.

Punctured and incised wounds of the cornea, if so small as not to admit prolapsus of the iris, usually require little treatment, except rest for a few days, wet compresses and a spare diet. When the wound is near the centre of the cornea, and prolapsus of the iris has occurred, the use of atropine, as just directed, may draw the iris from the opening, especially if the incision is small. This plan will scarcely succeed if inflammation has already commenced. It is allowable immediately after an accident, if prolapsus of the iris exists, to endeavor to reduce it by gentle efforts with the end of a probe or other similar instrument. Although such efforts will occasionally be attended with wonderful results, it should be remembered that the iris seldom escapes injury by such a use of the probe. Traumatic iritis is very liable to follow such an injury. It is

scarcely necessary to say that the reduction of a prolapse of the iris should only be attempted after the patient is under the influence of chloroform. It is undoubtedly a better practice after a prolapsus has been established, to clip off the protruding portion of the iris with a delicate pair of scissors, especially if it projects far and is painful, and easily irritated by the motion of the lids. It might be well in certain cases to pass a fine ligature around the prolapsus, close to the cornea, as in changing the position of the pupil by irridesis. You are aware that the total destruction of small parts of the iris, either by removal with the knife or by ligature, is less dangerous to the iris and to the eye than even slight bruises. Hence the two little operations just described are usually less dangerous than efforts simply to replace the iris in the anterior chamber.

When the iris protrudes through a small opening near the periphery of the cornea, it might be well to try the effects of extract of Calabar bean, which possesses the property of producing strong contractions of the pupil. Large wounds parallel or nearly parallel with the periphery of the cornea, are less liable to produce prolapsus, and heal more readily than wounds of like extent nearer the centre. Such injuries almost always heal with loss of vision, although wonderful instances of perfect restoration of sight are reported in works on diseases of the eye. The edges should be adjusted as accurately as possible, and the same treatment pursued as after extraction of cataract. It is your duty to urge upon patients with even the slightest injuries of the cornea, the danger of exposure to too strong light, changes of temperature, or other causes of irritation. Injuries apparently the most insignificant have terminated in loss of sight. It is one of the most important points in the treatment of these cases, to direct particular attention to the state of the patient's health; in vitiated diathesis, to support and nourish rather than deplete. I believe mercury is almost never required in injuries of the cornea.

As works of reference upon this subject as well as upon injuries of the eye generally, I would refer you to the work of W. W. Cooper, on Injuries of the Eye, and to the chapters on injuries in the works of McKenzie, Lawrence, and Walton.

PROCEEDINGS OF MEDICAL SOCIETIES.

MONTGOMERY COUNTY MEDICAL ASSOCIATION.

Pursuant to a call, the physicians of Montgomery Co., Ind., met in Crawfordsville, at the office of Dr. S. B. Morgan, on the 24th of October, 1863.

Dr. M. Herndon was called to the Chair, and Dr. E. W. Keegan appointed Secretary.

On motion of Dr. English, a committee consisting of Drs. Wilson, May and Detchon, was appointed to draft and present to the Society at its next meeting, a Constitution and By Laws.

On motion of Dr. Edgerlee, a committee consisting of Drs. E. Detchon, J. J. Shannon, J. G. McMechan, R. G. English, A. T. Steele, H. Keeney, and J. S. French, was appointed to prepare and present a schedule of prices for the government of the members of the Society.

Adjourned to meet Nov. 7, 1863.

Nov. 7th, 1863.

Montgomery County Medical Association met pursuant to notice at adjournment.

Minutes of the preceding meeting were read and approved.

Reports from the committees on Finance, and on Constitution and By-Laws were read and approved.

On motion of Dr. English, the Association proceeded to the election of Officers for the ensuing year, resulting as follows:

President, Dr. M. Herndon; Vice Presidents, Drs. S. G. Irvin and R. G. English; Rec. Sec'y, Dr. E. W. Keegan; Cor. Sec'y, Dr. J. B. Wilson; Treasurer, Dr. E. Detchon.

Ordered, that the annual meeting of the Association, shall be held on the first Wednesday in January of each year, in Crawfordsville, and the quarterly meetings at such places as may be designated.

Committees were appointed to report at the annual meeting in 1865, on the following branches:

Surgery—G. W. Edgerlee, M. D., Chairman, S. G. Irwin, M. D., and J. B. Wilson, M. D.

Theory and Practice—R. G. English, M. D., Chairman, J. G. McMechon, M. D., and E. Detchon, M. D.

Obstetrics—S. B. Morgan, M. D., J. J. Shannon, M. D., and M. S. Bass, M. D.

Materia Medica—J. Sloan, M. D., J. McClelland, M. D., and A. F. Steele, M. D.

Physiology—Stowe Detchon, M. D., W. S. May, M. D., and E. W. Keegan, M. D.

Chemistry and Medical Statistics—J. W. Straughan, M. D., S. G. Irwin, M. D., and E. Detchon, M. D.

Ordered, that the proceedings be published in the *Chicago Medical Journal.*

Adjourned to meet January 7th, 1864.

E. W. KEEGAN, Rec. Sec.

AURORA MEDICAL ASSOCIATION.

AURORA, Feb. 11th, 1864.

The Aurora Medical Association met at Dr. Young's office. The President and Vice President being absent, the Secretary, Dr. Young, called the Association to order, and on motion of Dr. Howell, Dr. P. A. Allair was chosen Chairman, *pro tem*

Dr. Howell proposed Dr. J. Woodworth for membership who was duly elected, and signed the Constitution.

On motion of Dr. Higgins, the Association proceeded to the election of officers for the ensuing year, and the following named gentlemen were duly elected:

President, D. W. Young, M. D.; Vice President, P. A.

Allair, M. D.; Secretary, J. Woodworth, M. D.; Treasurer, A. D. Howell, M. D.

Dr. Young offered the following:

Resolved, That the undersigned, practitioners of Medicine of the city of Aurora, do hereby agree and pledge ourselves to each other, as honorable men, that we will not do professional business for any person or persons, who have failed or refused to pay or settle their medical bill to their Physician, and whose names are reported to us or either of us as having so failed or refused to pay such medical bills; and we each further pledge ourselves, one to the other, to report and place on our "BLACK LIST" the names of every person or persons so failing or refusing to Physicians signing this Resolution, and, that we will, under no circumstances, attend them nor their families, until they first furnish satisfactory evidence of their settling with their prior attending Physician.

On motion of Dr. Woodworth, it was unanimously adopted, and the Pres., Dr. Young, appointed to circulate this resolution and obtain the signatures of all the Physicians in the city.

On motion of Dr. Young, the Sec'y was instructed to furnish a copy of our proceedings to the *Chicago Medical Journal*, for publication.

On motion of Dr. Howell, the Association adjourned to meet at Dr. Young's office, Feb. 18th, 1864.

J. WOODWORTH, Sec.

ILLINOIS STATE MEDICAL SOCIETY.

The regular annual meeting of the Illinois State Medical Society will be held in Chicago, on the first Tuesday in May, 1864. Every regularly organized local Medical Society is entitled to send one delegate for every ten members, and an additional delegate for a fraction of more than half of ten. Each Medical College and Hospital is entitled to two delegates. We hope there will be a general attendance from all parts of the State.

N. S. DAVIS,
Permanent Secretary.

Chicago, March 5th, 1864.

AMERICAN MEDICAL ASSOCIATION.

The 15th Annual Meeting of the "American Medical Association" will be held in the City of New York, commencing on Tuesday, June 7th, 1864, at 10 o'clock A. M.

GUIDO FURMAN, M. D., Secretary.

New York, March, 1864.

SELECTED.

PHYSIOLOGY AND PATHOLOGY THE TRUE FOUNDATIONS FOR MEDICAL PRACTICE.

EXTRACT FROM A LECTURE

By JOHN HUGHES BENNETT, M. D.

When we investigate closely into what is actually known of our therapeutical means, divided into alimenta, hygienica, and materia medica, it will be seen that we have no exact details founded on scientific research. What we require is, that such details must be first arrived at, and then applied in accordance with pathological laws. These point out that all treatment must be general and special—general as regards the nature of the disease, special as regards its seat. The great problem in conducting any given case is to carry out both indications, so that one does not interfere with the other. If, for example, the object be to favor the removal of inflammation or tubercle from the lung, the means requisite for that end must not be put aside or counteracted by a desire of alleviating pain, breathlessness, or expectoration. Indeed, one point of great importance, and which clinical observation has in recent times made manifest, is, that general and local symptoms frequently bear no relation whatever to the fatality of the lesion. Thus, an extensive acute inflammation of the lungs, a febricula, or an impacted gall-stone, may cause the most violent symptoms and perturbation of the economy, and yet spontaneously terminate in recovery in a few days; while a phthisis, a pleurisy with effusion, or even a pneumothorax, which may permanently destroy the action of a lung, may come on imperceptibly, and cause only trifling functional symptoms. To the pathologist, therefore, such symptoms are no longer the same guides to treatment as they used to be. They do not so much excite his regard as the causes or structural and chemical lesions which produce them, for he knows that the former will disappear if the latter are removed. It need not, therefore, excite surprise that as our knowledge of pathology has advanced, and our means of diagnosis have improved, we direct our attention more to the morbid alteration

and less to the temporary effects. In this way it has gradually become manifest that so far from doing good by attempts to relieve symptoms, we positively do harm to the disease. If, for instance, impaired digestion cause headache and sleeplessness, the relief of these symptoms by morphia is anything but beneficial, inasmuch as it depresses the nervous system and diminishes the appetite, and so increases the real disease. For the same reason, of what advantage can sedatives and cough mixtures be in phthisis? The true indication for treatment is to strengthen the appetite, increase the nutrition, and invigorate the frame. Medicines which only temporarily lull irritation, create nausea, destroy appetite, and favor diaphoresis, however they may relieve symptoms, can never arrest the disease.

Not long ago a young American physician brought under my notice a tincture of the veratrum viride, which he maintained possesses the power of diminishing the force of the pulse, and said that on this account it was a most valuable medicine in fevers, inflammations, and other diseases where the pulse was excited. But pathology indicates that so far from lowering the pulse in these disorders, what is required is in truth to support it, for the reasons I have formerly mentioned. Indeed, I can not conceive any circumstances in which such a remedy, even if it possessed the virtues ascribed to it, can be useful. But it so happens that several years ago Dr. Norwood, of Nashville, in the United States, sent me a bottle of the tincture, which I tried in several cases of fever in the infirmary. In every instance the medicine caused violent vomiting, pain in the stomach, weak pulse, and symptoms of collapse, and had to be discontinued; but in no one instance did it shorten the disease or improve the symptoms — quite the contrary. Yet this remedy is once more recommended to us on the ground of subduing, not a disease, but a symptom, although everything we know of pathology and the natural history of fevers and inflammations is entirely opposed to its employment.

In the same manner, hosts of new drugs, or new preparations of old ones, are constantly extolled and recommended on the most insufficient data, no one seeming to think it necessary to make experiments, careful observations, or deductions, but appealing only to a very limited experience. But we have previously seen that even where experience has been universal and unanimous—as in the case of bloodletting in inflammations—what mischief and error have arisen from unacquaintance with physiology and pathology.

As another example, let us for a moment consider the con-

tradictory opinions that prevail with regard to a medicine which, perhaps, has been more extensively tried than any other; I allude to mercury. I need not cite the extravagant praises which it has received from its partizans. It will suffice to say, that the most accomplished professor of materia medica in these times tells us that, physiologically, it is "a corrosive, irritant, errhine, cathartic, and astringent; a stimulant, diuretic, diaphoretic, cholagogue, and emmenagogue; and an excitor of that peculiar state of the constitution denominated mercurial action, of which salivation is one of the chief local signs. Therapeutically," he says, "it is antiphlogistic, alterative, sedative or contra-stimulant, deobstruent, antisyphilitic, and anthelmintic." (Christison.) A drug possessed of such wonderfully extensive and varied powers should certainly by this time have had its virtues universally recognized; yet the fact is that, with the exception of its action as a sialagogue and a cathartic, there is scarcely one other of its supposed virtues that is not disputed.

Is mercury a cholagogue? We have no proof whatever that it increases the secretion of bile; and the only experimental investigation with which I am acquainted—viz.: that of Dr. Scott, who gave calomel to dogs, and then collected the bile through a fistulous opening made into the biliary duct, found it in three days to diminish the quantity of that fluid.* Is it an antisyphilitic? In recent times it is admitted that syphilis has diminished in intensity just in proportion as the use of mercury has declined; and the gigantic experiments made on entire garrison regiments in France, Germany and Sweden, prove that the non-mercurial treatment of syphilis is far superior to the mercurial in every respect. Is it antiphlogistic? All that we know of modern practice negatives the idea. Does it cause absorption of lymph or the coagulated exudation? The clinical observations of Prof. John Taylor, of London, in pericarditis, and of Dr. Williams, of Boston, United States, in irritis, are opposed to such a supposition.

Then as to its mode of administration what differences exist. Some give it in large, others in small doses—some in acute, others in chronic diseases of the same kind. Some argue that it should precede, others follow venesection. Some combine calomel with blue pill to intensify its action; others with opium for the same reason. Its applications are so numerous and contradictory, that the question may well be, not for what dis-

*Beale's Archives of Medicine, vol. i, p. 269.

eases is it useful, but rather, which has *not* been represented to be benefited by this drug? In the meantime, it has been admitted that it arrests the appetite, checks nutrition, excites a peculiar fever and erethism, produces a coppery taste in the mouth, furred tongue, and salivation; and the pathologist may well inquire how a poison operating in such a way can have any curative tendency whatever?

Now why all this uncertainty as to the therapeutic action of drugs? My answer is—In consequence of our ignorance of an exact diagnosis and of a true pathology. Many persons think that the science of therapeutics is to be advanced by trying the effects of drugs on animals, by clinical observation, by records of cases, and so on; but whatever amount of knowledge may be thus arrived at, it can never be advantageous for medical treatment, until, as I have endeavored to show, we are capable of recognizing with exactitude the disease we investigate, and, secondly, know its nature and natural progress.

These steps must be preliminary to all advance in therapeutics, and that they have not hitherto been made so, is at once the explanation of past failure, and the indication for future success. The true promoters of therapeutics, consequently, are not those men who pass their lives in treating patients as well as they can from the results of pre-existing or present knowledge; they are not those who are constantly arranging the opinions and assertions of former writers as to the effects of past treatment; but they are those who direct all their energies to improving diagnosis and advancing physiology and pathology. This conviction must force itself on the minds of all who seriously consider the subject, and, in truth, it is the one which renders every earnest and truthful student amongst us a pathologist. The result is already obvious. We are gradually sweeping away the errors of empiricism, slowly clearing the ground for the erection of a more simple and solid temple of knowledge. This accomplished, we hope to accumulate, by laborious toil in research, materials for its foundation,—a work to which I think we are gradually approaching,—in the hope that, by patience and perseverance, a day will arrive when Medicine will be generally allowed to have approximated towards, if it does not actually reach, the character of an exact science.

The true principles, therefore, which should guide our efforts to advance therapeutics are—

1st. That an empirical treatment derived from blind authority, and an expectant treatment originating in an equally blind faith in nature, are both wrong.

2nd. That a knowledge of physiology and pathology is the real foundation and necessary introduction to a correct study of therapeutics.

3rd. That a true experience can only have for its proper aim the determination of how far the laws evolved during the advance of these sciences (physiology, pathology and therapeutics) can be made available for the cure of diseases.

THE CONSUMPTIVE CURERS OF NEW YORK.

By an Invalid M. D.

With regard to life it has been said by a late writer, that "we persuade ourselves that it teems with novelties and delight; that it abounds with high festival days and gala shows, somewhere in happier regions, although they come not to us." This remark is especially true with regard to the hopes and expectations of the invalid.

Art may fail him at home, measures which he must feel are well directed, may disappoint, friends may mournfully walk around him; still his mind at times overleaps all, and loves to revel in the idea that somewhere, in some unknown land, there lives the mind to conceive, and there exists the remedies which it can direct, for his recovery.

The sweet solace of the mind, Hope, as every one knows, is the constant attendant on consumption, where it is, indeed, a heavenly visitant. Wasting day by day, who has not seen the wretched victim letting go the greater hopes of yesterday, which may have pointed him to a complete recovery, but to cling the faster and with as sweet content to those of to-day, although they promise only a partial convalescence.

I cannot conceive of a more beautiful dispensation of Providence than this. Round and round in a narrowing circle, day by day, but nearer the end, yet there is always hope that the last thing tried, despite of preceding failures, will prove just what is wanting. So sweet a comfort the pitying angel must send for a good purpose. But so much good comes not unmixed with evil; for this very buoyant feeling of hope is taken advantage of by designing men, whose promises to furnish remedies to suit every case, are only equalled by the extent of the popular credulity. I believe that it is in ignorance, that

such deceive the afflicted. If there are any who do it knowingly, who *will* take advantage of this heaven-born feeling for the purpose of money-making; to them I have but to say with Othello:

> Never pray more: abandon all remorse,
> * * * * * * *
> For nothing canst thou to damnation add,
> Greater than that.

Messrs. Editors, guided by just such feelings as I have attempted to describe, I directed my footsteps to the great city of New York. I have a large cavity in the upper part of the left lung, and I had been told with a sad voice and a firm aspect, by one whom I loved and had every reason to respect, that softening had already begun in the apex of the opposite organ; and I am emaciated to the last degree. Nevertheless, from the glowing accounts which I had heard of the wonderful power over the disease, possessed by numberless men in this great commercial emporium of our Union, I resolved to proceed thither at all hazards.

My mind was filled with vague, but most embarrassing hopes, shadowy outlines of superhuman skill, in men, high above their fellows in point of pure humanity and disinterested devotion to the science of life, flitted before my morbid vision, giving me strength to endure the journey.

Two great parties I found engaged with equal zeal in this important work. The one I shall describe as the constitutional class, or those who adopt a general treatment; the other the local, or those who adopt a strictly topical method of cure. I had been educated in the former school, and did not tarry long with its professors.

Improve the nutrition,—cod liver oil—good diet—much out door exercise,—measures which I knew had saved me so far, were all they could tell me about, but knowing all this before, I was not satisfied, and wished to go farther; for these I found were not the men who were doing so many wonders. I diverged a little into the intermediate class—a sort of divining doctor, by spiritual agency—who had an immense run, as I learned, among the clergy. The Dr. was overrun with patients—his ante-room was like the lobby of a theatre on the night of a popular actor's benefit.

I took my seat, and abiding my turn, it came at last. I found behind the scenes, one having the air of "a most prosperous gentleman," who looked through my case with an imposing flourish—smiled approvingly—received a fee,—I thought an

enormous one,—and bade me follow him and I would be well. Conducting me back into the ante-room, he sang out some words in an unknown tongue to a clerk near the window, who wore a remarkably stiff, standing shirt collar, and then, with a graceful wave of the hand, withdrew. This latter person at once handed me a package of medicine, already neatly put up in a handsome paper box. Ah, said I in surprise, did you have it ready? Yes, said the clerk, carelessly, I saw you come in, and whilst you were waiting to see the Boss, I put it up. Then, rejoined I with warmth, you knew beforehand what he intended to give me?

The clerk with a stiff standing collar, thrust his tongue into his left cheek, drew the lower lid of his right eye grimly down with his ring finger, leered at me significantly, but with much good nature, and I departed, I trust a wiser man.

After visiting a man who had told me that he had enjoyed the honor (hitherto unknown to Americans) of being the physician for many years to her majesty, Victoria, queen of England, and that he had a book which he sold for 12½ cents, which would tell me how to cure myself of any disease as well as he could; and which I did not buy for reasons which must be obvious; I became disgusted with this whole class, and having no other alternative, threw myself into the arms of a Topical party, with hope still undiminished.

But in this there was some difficulty, for I found two parties, and which to select perplexed me some. The one I shall characterize as the *Probangers*, the others the *Inhalers*. From what I learned, the history of these parties is possessed of no little interest.

It appears that the Probang, and its accompanying sponge and caustic, were not originally used to cure consumption. In simple throat affections, however, it had had an immense run. Clergymen every where had tried it, and such of their flocks as they could influence had followed suit, and the whole thing became rapidly much in vogue.

Finding how easily it went down the throats of the people, it bye and bye took a bolder stand, and stoutly proclaimed its power to cure consumption, in its most common form. Still, it must be remembered, in all this time it never claimed to go beyond the bifurcation. But we all remember how popular it was, and what vast sums of money it must have made.

Whether it was the latter, which is a great stimulus to invention, or some higher motive, it is certain that this thing did not pass unnoticed. Active minds were at work, and vigorous

intellects became engaged in tapping this rich mine, and in pushing farther the investigation. As the result of all this, inhalation turned up. The probangers were taken on their own ground—the people were told that if topical treatment, so partially applied, was successful, how much more were they entitled to expect from a method making the whole lung accessible to medical agents. The reasoning was plausible—the thing took—Probangdom tottered to its very base, and inhalation became the rage.

But our friends were not to be put down in this manner; they were penetrating men, and at once saw that all they had to do was to go a little deeper. The old idea of the bifurcation being the limit of the probang was therefore abandoned, and it was proclaimed that cavities could be invaded and sponged out, and that inhalation could not dare do more than it.

This was the state of things at the time of my visit, and it was this which led to my perplexity already spoken of.

But as I had already (as every body else almost have done in my situation) used the probang, as far as the bifurcation, as it was said to have been applied, I at length decided upon inhalation, and repaired without delay to its head-quarters in the city. The Doctor received and examined my case with exceeding care. At home, my medical friends could perceive at a glance, as they told me, by the flattening of the left side of the chest, and by its quiescence during respiration, the nature of my disease, but these signs were not sufficient for my new adviser.

He stripped me to the skin, measured, percussed, and auscultated, over and over again every part. I never saw so much pains, and would have thought some of his manipulations indicative of decided "greenness," but for the exalted reputation and obviously large experience of the operator. He found my case a very beautiful one—I was, he said, just enough diseased to test the full power of his method. In the course of his remarks, however, it turned up that this person was not the genuine man so widely known, and I dressed myself with some show of indignation. He took my complaints very quietly, and showed me into the next room. The person who there received me won my heart. He showed me around, examined my case, predicted "a good time coming" for me soon, but in the midst of it all, announced himself as only an assistant, and appeared greatly surprised that I should think anything of that. I stamped in rage, and announced that I

had come all the way from Virginia just to see the genuine article, and would not be satisfied with any substitute. This gained me admission into the great man's presence. I found him superb. My account of my reception amused him much, and we became unreserved and quite intimate.

The fact was, he told me, that these fellows had come well recommended to him,—the business had prospered in their hands—he was no judge of qualification—didn't pretend to it —had seen an opening for it, had got the business up, and managed only the advertising and money department. In short, said he, I am only the capitalist of the concern. The little fellow you first saw, he furthermore proceeded, is I think myself, a little too fussy over the chest, but the other one, I do think, is *nice* for the throat.

I had one other chance, which was to have my cavity sponged out. The Doctor told me my case was a beautiful one for the treatment. I admired his ingenious arguments in favor of his method, and was quite carried away by his charming description of the *rationale* of the whole operation. When he finished, I announced, with enthusiasm, that I was a convert to his views, and pronounced myself ready at any moment for the operation. He examined me again with greater care, and with a faint touch more of gravity in his countenance. It was just the thing for my case, said he, and would have to be done, but not then. You get back home, he proceeded, and *get a little more strength*, and then return, and I'll perform the operation for you.

One hour afterwards, feeling as a doomed man, I left the great city of New York. The consumption curers have taken from me all my bright hopes, and left me but a mockery.—*Virg. Med. and Surg. Jour.*

MINERAL ACIDS IN DYSENTERY.

By Dr. JAMES HENDERSON, Medical Officer to the Chinese Mission Hospital, Shanghai.

[The following is from the Annual Report of the Hospital at Shanghai—a hospital which, from the great number of patients and the variety of the cases treated, must well tax the energies of its sole medical officer, and reflects the greatest credit on his professional skill.]

I found cholera and dysentery prevailing to a great extent and proving very fatal. Soon after the middle of September, I became much struck with the rather unusual type which dysentery in most cases assumed. A few days after the disease commenced, typhoid symptoms usually appeared, great prostration supervened, frequent pulse with a dry brown tongue, and sometimes slight delirium. The whole nervous system seemed prostrated, plainly indicating stimulant treatment, and yet the ordinary stimulants produced no beneficial or decided effect. Wine, brandy, ammonia, camphor, mercury and opium seemed in many cases useless, either to modify the bowel complaint, or rouse the nervous system; indeed, mercury and ammonia seemed to do mischief. Quinine, when retained, appeared to do good, but only in some cases would it remain on the stomach, the mortality was great, and decomposition of the body unusually rapid. On examining the blood of some patients, and comparing it with blood taken from a healthy individual, the former gave a much more decided alkaline reaction than the latter. Even the urine of patients with typhoid symptoms gave in many cases an alkaline reaction, thus indicating a condition of super-alkalinity in the body, or at least, a deficiency of acid. This led me to adopt an acid mode of treatment, which proved decidedly beneficial and successful; and as hydrochloric acid enters so largely into the composition of the tissues of the body, I preferred it to the other acids. It is best to give it with some bitter tonic and a little laudanum, if necessary, every three or four hours, and after the second or third dose, a change for the better is in most cases visible. After adopting this method of treatment at the end of September, very few died, if the treatment was commenced before complete prostration of the nervous system ensued. The patients themselves seemed to feel the good effects of the acid, one man who was admitted in a very weak and prostrate state, with frequent and painful stools, used to call out for more medicine, declaring that it put new life into his body. In about two-thirds of all the cases of dysentery which presented themselves, between the beginning of September and the middle of December, symptoms more or less of a typhoid character were present, and, in a large number they were very marked and decided.

Some cases of pure typhoid fever occurred during the months of November and December, and in the treatment of this disease, the beneficial effects of hydrochloric acid were strikingly manifest. In the treatment of typhoid fever they seem to me

as decidedly beneficial and *specific*, as the effects of quinine in ague. Through the "London Medical Times and Gazette" I have recommended a *full* trial of this remedy, in typhoid fever and in dysentery with typhoid symptoms, to be made in the London hospitals. The good effects of hydrochloric acid in typhoid fever are easily explained. Ammonia in large quantities is constantly formed and emitted from the body of a patient with typhoid, and indeed in all cases of low fever. In all cases and conditions, where destructive metamorphosis of the tissues of the body proceeds more rapidly than the nutritive metamorphosis, an excess of ammonia is given off from the body, and the blood is found to be more alkaline than when the functions of the body are in a normal state. The breath even, when analyzed after fasting or great exertion, contains a larger proportion of ammonia than after rest. Moreover, it has been proved by injecting ammonia into the veins of animals, that symptoms are produced exactly similar to those in patients suffering from typhoid fever. Thus clearly indicating that in typhoid fever there is an excess of alkali in the system, in other words, there is not acid present in sufficient quantity to neutralize the alkali, and surely in such a condition a treatment by acids is clearly indicated. The blood of patients suffering from scurvy and purpura, is almost exactly the same as the blood of a patient in typhoid fever. These diseases are universally treated by acids, and why should not also low forms of fever?

In most cases, after the second or third dose, the tongue begins to clean, there is less thirst, the diarrhœa abates, and there is less depression and languor. When there was delirium or low muttering, I gave the acid and bitter infusion in half a wine glass-full of port wine, instead of cold water, which improved all the symptoms even in the most acute cases In many cases of dysentery, ipecacuan wine given with the acid was useful.—*Braithwaite's Retrospect.*

ON GALL STONES.

By Dr. J. L. W. THUDICHUM.

A knotty point which Dr. Thudichum has helped to solve is the nature of the morbid process to which gall-stones owe their origin. In this process two things have to be considered.

(1.) The decomposition of the bile, and consequent precipitation from it of the different materials which form the nuclei of gall-stones. (2.) The mode in which such precipitates come to form concretions. The cause of the decomposition—that is to say, the pathological condition of the liver in which it originates—is still a mystery. Dr. Thudichum suspects it to be some putrid ferment generated in, and absorbed from, the intestinal canal. But, be the cause what it may, the fact that the first step in the formation of a gall-stone is decomposition of the bile and precipitation of certain of its ingredients, is now undisputed; and by the light of the chemical changes which he has ascertained to take place in putrefying bile outside the body, the author attempts to explain the exact nature and successive steps of this decomposition. His explanation is too long for quotation. We would merely remark that it appears to us very reasonable, being (as he fairly claims it to be) "derived from all the data on record, with only so much of hypothesis as seemed justified by the amount of incontrovertible knowledge." As to the second point, viz., how concretion of the precipitates is effected, he shows the untenability of the old hypothesis, which ascribed it to inspissation of mucus or bile, and maintains that "the binding material of the nucleus of gall-stones is cholic acid, or chloidic acid, or both."

The author's description of the symptoms of gall-stone colic is of great value, because based exclusively upon cases in which the gall-stones were found after death. The general opinion that these concretions produce symptoms only when lodged in the *common* duct, has (he observes) of late "become very doubtful, as it has been found that calculi in the *hepatic* duct or ducts produce symptoms of a peculiar kind, differing from the symptoms of gall-stones in the gall-bladder and common duct by the absence of pain, end having the greatest resemblance to chronic intermittent fever. In one case treated by Frerichs for a long time by means of quinine and other febrifuge remedies, the rigors and other symptoms simulating fever were caused solely by calculi in the hepatic duct; their presence had not been suspected during the life of the patient."

Retardation of the pulse, he holds to be a pathognomonic symptom in this disease. In forty-five cases observed by Wolff, "the symptom of diminished frequency was so constantly found during frequent observations, that in doubtful cases (*i. e.*, in absence of jaundice) it was mainly relied upon for the diagnosis."

Jaundice, he believes to be by no means of such frequent occurrence during the passage of gall-stones as is commonly supposed. It was present in only twenty out of Wolff's forty-five cases. "The number of cases in which no jaundice appears is probably still larger in comparison to those in which it appears, as cases of the former kind easily escape diagnosis, while those accompanied by jaundice are never lost sight of."

Dr. Thudichum's remarks on the treatment of gall-stone disease, though advancing nothing positively new, contain some useful practical hints. He illustrates the necessity of leaving remedies, and directions for using them, with persons who have once had serious gall stone colic, so that, in the event of any sudden return, they may be employed without loss of time. The only known internal remedies effectual in mitigating the pain during the paroxysms are anodynes, such as opium, belladonna, and ether; but much caution, he shows, is needed in their administration, because when they have been taken in large doses they are apt, after cessation of the pain, to produce dangerous symptoms of narcotism. Both reason and experience, in his opinion, contra-indicate any abstraction of blood, either general or local, during the passage of the concretions. Their solution in the living body he believes to be impossible; their expulsion during the use of certain mineral waters (Carlsbad, Marienbad, Ems, Vichy, and others) he admits, but confesses himself unable to explain. He summarily condemns the practice of giving mercury in cases of jaundice from calculous obstruction, "or in any other cases of jaundice from whatever cause, syphilis excepted. Calomel is not a cholagogue, but diminishes the secretion of bile....." We cannot go the same length as Dr. Thudichum in condemnation of this remedy. To give it in jaundice from obstruction is manifestly senseless and mischievous. But, be the action of mercury what it may, in many cases of functional jaundice (especially in children) we find a moderate dose of calomel set the patient to rights so promptly, efficiently, and safely, that even Dr. Thudichum's strong disapproval will not persuade us to discard its use.—*From Dr. Thudichum's recent work on "Gall-Stones; their Chemistry, Pathology, and Treatment."—Med. Times and Gazette, Aug.* 8, 1863, *p.* 151.

EFFICACY OF

SESQUICHLORIDE OF IRON FOR THE TREATMENT OF ULCERS ABOUT THE NAILS.

By Dr. M. BILLON, Surgeon 19th Regt.

Dr. Caillet, of Luynes (Indre et Loire), having recently published a case in which the application of sesquichloride of iron effected a cure of the affection popularly termed *the growth of the nail into the flesh*, I take this opportunity of recording several instances of the same kind, witnessed by myself, which confirm the results obtained by M. Caillet, and may perhaps be deemed not wholly uninteresting. In 1858, Dr. Wahu, staff-physician to the army, having succeeded with this remedy in curing the painful diseases in question, I resorted to the same method, and with the greatest benefit in four cases. I may here remark that ulcers above the nails are occasionally observed among our soldiers, having escaped the attention of the medical boards, or being caused by the pressure of the boot during forced marches. Under these circumstances a *prompt* and *painless* cure may be effected by inserting *dry* sesquichloride between the nail and the protruding flesh, and powdering the latter with the same substance. A large bandage should be applied over all, not impregnated with the *liquid* sesquichloride of iron, as recommended by Dr. Caillet, a precaution which may, however, be useful, as the folds of the band dry rapidly, and preserve their situation in a more exact manner.

On the following day, the exuberant flesh is found to have acquired the hardness of wood; suppuration speedily ceases, and a cure follows after two or three applications. This simple and mild treatment is obviously far preferable to the numerous surgical procedures hitherto recommended. In the course of four or five days, in a week at the farthest, the original pain ceases, the swelling subsides, and the patient is able to walk. Naught remains but the hardened, protruding flesh, which falls away about a month after the application of the sesquichloride of iron. These are the results yielded by the method in four soldiers suffering from the growth of the nail into the flesh. They have appeared to be sufficiently remarkable to warrant the communication.—*Jour. Med. et Chir.*

ON THE TREATMENT OF ECZEMA.

By Dr. J. WALLACE, Dalston, Carlisle.

[We give one out of several cases related by Dr. Wallace, to illustrate a mode of treating eczema, which we have ourselves followed for many years, and which we know is usually most successful. The plan of treatment consists in getting the patient or nurse to keep the parts continually moist with lint saturated with a very weak alkaline lotion. The proper strength is about half a drachm of carbonate of soda to eight ounces of water. It is a *sine qua non* that the lint should never be allowed to dry, otherwise the application is worse than useless.]

Case.—A. B., a quarryman, aged thirty-four, consulted me in October, 1861, who had a skin disease of six years' duration, extending over both cheeks, of a circinate form, and communicating over the nose. Had been in two infirmaries, consulted many medical men, and had all sorts of ointments and lotions applied, which invariably made the disease no better, and oftener worse. In every other respect he was healthy. On examination, the diseased surface presented the appearance of dry, indurated, laminated scales, firmly impacted, overlaying and dovetailing with each other, so as to form a crust about one-eighth of an inch, nearly, in thickness, over both cheeks. On the nose it was thinner and moist. Round the margins was a slight erythematous blush, the incrusted morbid epithelium flattening off to the healthy skin, and at the junction of the two a watery fluid, he said, sometimes oozed. On careful and repeated inquiry, it was found that at first there was no hard incrustation, but that a raw surface had oozed a watery fluid, etc.; in short, that it was eczema utterly changed in its character by the multiplicity of intended remedial applications—the last one having been mercurial ointment. He was ordered to apply the alkaline wash—a drachm of carbonate of soda to half a pint of pure water—by means of lint and a mask; the lint to be moistened three or four times daily with the lotion, and, as he was working in a quarry, to be moistened with pure water frequently from without, as he found it becoming dry. Also to take fifteen minims of the tincture of the muriate of iron, thrice daily, in water. In four days the crusts came off, and a healthy skin was partly formed over

the diseased surface. It went on improving, and in three weeks the disease had vanished, and his face was, as he expressed it, "like other people's."

I put more faith in the external application than the internal alkaline remedies with arsenic, although I do not ignore the latter; but I have cured eczema, again and again, by means of the former only. What the therapeutic action of the alkaline lotion may be, is a matter of speculation. It has peculiar local sedative effects, while it is also gently stimulating; but may there not be some peculiar organic acid which by an irritating influence raises the eczematous vesicles and sustains the acrid discharge, which it neutralizes and ultimately destroys, so as to permit the speedy formation of new cuticle? Whether or not this may be the case, pathology will ultimately reveal; but, in corroboration of this idea, I have often found the alkaline lotion of great use in old constitutional and irritable ulcers, evidently from the same cause; and, indeed, the chief ingredient in every old wife's herb-salve in the country is alkaline.—*Lancet, Aug.* 29, 1863, *p.* 259.

ON THE TREATMENT OF RHEUMATIC FEVER.

By WILLOUGHBY F. WADE, M. D., M. R., C. P.

Senior Physician to the Queen's Hospital, Birmingham.

The few remarks I have to make refer chiefly to the treatment of rheumatic fever; still there are one or two points to which I should like to allude first.

Rheumatic Fever seems a more appropriate term than Acute Rheumatism, inasmuch as, by the consent of probably all pathologists, the disease is now esteemed to be an essential fever, rather than a pyrexia consequent upon, and therefore indicative of, local disorder. Most of us must have seen cases in which the febrile symptoms were well developed, whilst the joints remained little or not at all affected. Graves particularly notices this feature, which is also recognized by Latham and Fuller. Now, this is characteristic of idiopathic fevers; nevertheless, in rheumatic, as in typhoid, fevers, the pyrexia may be re-excited or maintained by an accession of new or an aggravation of old local disorder. This fact, as connected with continued fever, has been thrown into relief by Dr. Jen-

ner—"the Dr. Jenner of our day," as Dr Watson so gracefully styles him. Attempts have been made to determine the exact nature of the *materies morbi rheumatici.* Lithic acid, lactic acid, and an undue preponderance of fibrin in the blood —hyperinosis, as it is termed—have each been claimants for this bad pre-eminence. Their respective titles to this position I shall not now occupy time in discussing, inasmuch as the question of the exact nature of the rheumatic poison, if such poison there be, is still, in my opinion, an open one.

With regard to the superabundance of fibrin in rheumatic fever, which I believe to be an admitted fact, it has recently acquired additional importance. We know how rare is delirium in this disease, whatever its severity. True, it is not unknown, but when present, it would seem to depend upon some peculiar and not well understood condition, and not to be proportioned to the intensity of the pyrexia simply, as in other fevers. Now, the researches of Drs. Charles Hood, Marcet, Erlenmeyer, and Hittorff seem to show that there is always a marked deficiency of fibrin in the blood of maniacs, either acute or chronic. A similar condition was found by Andral in idiopathic fevers, of which, when at all severe, delirium is so common a feature. Are we, then justified in suspecting that there is any connexion between the hyperinosis of rheumatic blood, and the infrequency of delirium in rheumatic fever? A therapeutic test would seem to show that when delirium does occur in this disease, the condition of the system approaches that of typhus. I have seen several well marked cases—one some years ago, which was treated, I forget how, but certainly not with stimulants. It terminated fatally: no marks of inflammation were found in the head. Three others have been under my own care during the past two years—one in the Queen's Hospital, surpervening on diarrhœa and attended with bedsore, which recovered perfectly under the use of wine in considerable quantity. The third case, which I saw at Dudley in consultation with Mr. Fereday, also supervened upon diarrhœa, and also recovered upon a freely stimulating plan. These three patients were females. A fourth case, in a man, likewise supervened on diarrhœa, and recovered after free stimulation. The occurrence of diarrhœa in those cases, and their recovery under a highly stimulating plan (recommended first by Dr. Todd), connect them with cases of what were termed by Dr. Marshall Hall the "hydrencephaloid" disease of children, of which diarrhœa is commonly the precursor, and which is also to be best met by stimulants.

This infantile disorder did not escape the acute observation of Dr. Gooch.

Two more cases have come under my notice since the preceding remarks were written. One was complicated with extensive pneumonia. Both supervened upon diarrhœa, and both recovered under the free use of stimulants.

This hyperinosis of rheumatic blood has other significant connexions. A similar peculiarity is exhibited by the blood of anæmic patients. Now, we have all heard of anæmia as a sequela and result of rheumatic fever, but we hear little or nothing of what I believe to be far more common—namely, rheumatic fever as a sequela of anæmia. A deficiency of red corpuscles is one of the most common prodromata of the malady. This fact has been concealed by two circumstances. In the first place, when large bleedings, low diet, and inefficient medication were employed in its treatment, with a consequent prolongation of the disease over months, instead of weeks or days, it seemed superfluous to inquire whether the patient had been previously anæmic. In the next place, the flushed countenance and hard full pulse of the fever disguise the ordinary symptoms of anæmia—pallor and feeble pulse,—which do not become manifest until the pyrexia has passed off, and are then attributed to its vehemence. We are often similarly misled in cases of chlorosis. When the patient is first seen, the face flushes with excitement, and the heart's action is stimulated by the same cause; and it is not till this simulation of health has subsided that we discover the well-known proofs of anæmia. I venture, then, to affirm, that in most cases of rheumatic fever we shall be able to elicit a previous history of that debility which is a common concomitant of deficiency in the red globules of the blood. And another feature of such blood—viz., its excessive proportion of fibrin—is, we know, a most constant if not essential characteristic of rheumatic blood.

I will now pass on to the treatment I adopt in cases of uncomplicated rheumatic fever—that is to say, the routine treatment; for I contend that whilst different cases may present differences requiring certain modifications, yet, on the whole, there are few diseases which are more constant to their respective typical forms, and, if we are to admit the propriety of routine treatment at all, we may safely include this complaint in the category of diseases which may be so dealt with.

I may state that for many years I have paid especial attention to this subject, and when I first went to the General Hospital as house-physican, now eleven years ago, I had, by the

kindness of the then physicians to that institution, ample opportunity for employing the various plans recommended by authors.

The first thing to be done, then, is to put the patient in bed, and wrap up each joint in a thick layer of cotton wool, secured but not too tightly, by a tape or bandage. This answers two purposes: in the first place, it preserves the joint from pressure, and so removes one great source of pain and apprehension; in the next place, it preserves a uniform warm temperature of the joint favorable to perspiration, which, being highly acid, we suppose to contain either the actual *materies morbi* or else some of its secondary products, retention of which within the system can not be otherwise than prejudicial. Besides, the presence of this acid in the blood supplied to the joint we are led to believe to be the chief cause of the affection; its removal, therefore, even in small quantity, from the joint tends to cure the local disease, though it may produce but little effect upon the general symptoms. Dr. Todd recommends that a layer of oiled silk be wrapped outside the cotton wood; and he adds that, when removed, the wool will be found completely saturated with moisture. True, if we confine all the perspiration of twenty-four hours by means of the impervious coating, the wool will become moist, but this is no proof that there has been more fluid secreted than there would have been had it escaped as soon as formed; I think, indeed, we are likely to have less. However, if any one chooses to adopt this method, I would recommend them to add to the wool a quantity of finely powdered alkali (soda or potash).

Dr. Fuller relates some experiments bearing upon this point. He found that more speedy relief has been obtained by applying an opiated alkaline lotion to the joint than by warm water, solution of nitrate of potash, or simple alkaline solution. He goes on to say, "That the effect observed to follow these saline fomentations has not been due to accidental causes is manifest from the result of careful experiment; for, in order to guard against any source of fallacy, I selected fourteen instances in which corresponding joints were affected, and applied a fomentation of warm water to the one joint and an alkaline and opiate solution to the other, and almost uniformly the pain and inflammation continued in the former, and speedily subsided by the latter. Besides this, I have endeavored to ascertain whether the occurrence of inflammation may not be prevented in impregnating the parts with alkaline matter. In nine cases in which the knees and in severe cases in which the hands

were in the first instance unaffected, a mixed saline and opiate solution was applied to one joint, and a simple water fomentation to the corresponding joint on the other side. In four of the former cases, and in two of the latter, the joint to which water only had been applied became inflamed, whilst in one instance only did inflammation occur and that to a very slight extent, in the joint which had been bathed in an alkaline and opiate solution."

These applications might, I think, be used more frequently as preventives of pericarditis. There seems, for example, to be an unusual tendency to pericarditis in rheumatic fever secondary to scarlatina. Of this form of disease I have seen five instances; in four of these there was pericarditis, complicated in two of them with pneumonia. The pericarditis was in the four cases, of unusual severity and importance. The fifth case, sister of one of the others, was the only instance of scarlatinal rheumatic fever in which spongio-piline saturated with a solution of bicarbonate of potash (half an ounce to eight ounces) was applied to the precordial region, and the only one in which pericarditis did not supervene.

I think the patient's comfort is best secured by a simple application (cotton wool), which does not involve a redisturbance of thepart, to the inflamed joints, and by letting the others alone. This being done, I administer a dose of calomel of from five to ten grains in combination with from thirty to sixty grains of the compound jalap powder. In a few hours this produces several copious evacuations containing much bile and causing a soothed and comfortable feeling as soon as the patient has recovered from the pain and fatigue consequent upon its operation. Indeed, a beneficial effect is oftentimes perceived by the patient some time before any ostensible results have ensued.

Independently of the value which experience awards to this plan as applied to rheumatic fever, we know that in other active febrile disorders a purge containing calomel relieves the systemic irritation in a marked degree. Besides, one of the commonest precursors of rheumatic fever is a yellowness of the sclerotics, which, as well as the irregular state of the bowels and unhealthy character of the motions, indicates the desirability of acting upon the hepatic system. This plan, indeed, has been adopted to the exclusion of all other medication. Dr. Chambers, who was a skilful as well as a fashionable practitioner, was in the habit of prescribing ten grains of calomel every night and a draught of salts and senna the following morning, as Dr. Latham informs us, with much success.

There is this reason against adopting it exclusively: the disturbance of the patient is very painful and distressing, and I think that after the free operation of the single dose, he may be spared all necessity for this disturbance by adopting another plan for three or four days, by which time his movements will be comparatively unrestricted. Dr. Latham points out that whilst Dr. Chambers' method is styled "the purgative plan," yet its purpose is achieved by calomel and purgatives conjointly. "The purgatives," he says, "would not answer the end without the calomel; of that I am quite certain. Neither would the calomel answer without the purgatives, unless it produced of itself ample evacuations from the bowels. It is probable, in short, that the medical efficacy of the plan resides essentially in the calomel; in calomel, however, not as *mercury*, but as itself—calomel." But it often happens that a patient has taken a quantity of purgative medicine before we are called to him. I am so convinced of the efficacy of the calomel that even under those circumstances I still administer it; but, instead of combining it with a purgative, I added ten or fifteen grains of Dover's powder, which acts as a calmative and promotes perspiration, without diminishing, even if it does not increase, the cholagogue properties of the calomel.

[*To be continued.*]

EDITORIAL AND MISCELLANEOUS.

Illinois State Medical Society. — It gives us pleasure to direct attention to the notice of the Annual Meeting of this Society, which is contained in another part of this number of the *Journal*. We hope to see every section of the State well represented. Provision is made in the Constitution of the Society whereby *all* who attend may participate in the proceedings of the meeting. At this meeting, delegates will be selected to represent the Society in the next meeting of the American Medical Association, a notice of which will also be found in this *Journal*. Let the Annual Meeting in Chicago, in 1864, be worthy the State. We assure our brethren a cordial welcome.

The Best Diuretic.—Dr. A. P. Davis, of Sandford, Ind., writes us that the common Hazel-nut Shrub (*Corylus Americanus?*) growing all over the Western glades, is one of the best diuretics in use. A decoction made of the young shoots and drank freely is the most convenient mode of administration.

A Misappropriation of Public Funds.—The prosecution in the Court-Martial upon Surgeon-General Hammond has recently closed without establishing one of the charges set forth in the indictment against him. It is to be regretted that a quarter of a million of the public money should have been thus expended in a vain attempt to blast the reputation of an officer whose administration of one of the most important Government Bureaux has challenged the admiration of the medical profession of this and foreign countries.—*American Med. Times.*

MEDICAL MATTERS IN VICKSBURG.

[To the Editor of the American Medical Times.]

Sir:—The medical affairs of the Gibralter of the Mississippi, held by the Union forces since the 4th of July last, may perhaps possess some interest for the profession at large, as well as the medical department of the army.

At the time of the first occupation of the city by General Grant, the Medical Director of the Department of the Tennessee was Surgeon Madison Mills, U. S. A., who was soon succeeded by Surgeon John Moore, U. S. V. This gentleman still continues in the office, and lately made a tour of inspection of the hospitals of Vicksburg. I freely bear testimony to the efficiency and courtesy of Dr. M., during my term of service in that department. Through the politeness of my friend and pupil, Thomas C. Coxe, Medical Cadet, I am enabled to present a few facts in relation to the hospitals there.

He says:—"Hospital No. 2 has two hundred and fifty-three patients, under charge of Surgeon Hill, 20th Ohio Vols.; the 'Marine,' under charge of Surgeon Kemble, U. S. V., has two hundred and seventeen patients. The Marine is now more generally known as 'No. 3.' The McPherson Hospital, under charge of Surgeon E. Powell, 72d Ill. Vols., has one hundred and thirty. These are all the General Hospitals now in the

place.....They all draw full, or nearly so, ordinary rations; while for the lighter articles of diet for the sick, they depend almost entirely upon the 'Sanitary Commission,' whose agency here is well supplied with everything needful, which they issue liberally." Fresh fish and some few vegetables and fruits can be obtained from the market.

Vicksburg, it is well known, is situated in a district of country where fruits, such as peaches, apples, plums, cherries, etc., are easily cultivated. Melons, cabbages, tomatoes, potatoes, and other products of the garden were plentiful before the breaking out of the rebellion. The grounds around the city at present, however, are necessarily but little cultivated, and the belligerent forces destroy what is produced. The Sanitary Commission do a good work in supplying this deficiency from the rich fields of the West The onion patches of Wisconsin, the potato fields of Indiana and Illinois, contribute largely, through the Commission. Here I must express my opinion on the value of the preparation called dessicated vegetables, so common in the army (an Eastern production, I believe). They are, in my estimation, when *properly cooked*, a most excellent substitute for the fresh article.

"Surgeon J. H. Boucher, U. S. V., is the Medical Director of the Corps (17th, McPherson's); but being temporarily absent with the expedition, Asst. Surg. C. D. Davis, 17th Wis. Vols., acts in his place. Brig. Gen. McArthur is Commander of the post.

"Asst. Surgeon Ridgely, U. S. A., has turned over the Purveyor's office to Dr. Morrison."

The health of the city itself has been attended to by Surg. Churchman, U. S. V., who was appointed to the position of "Health Officer" shortly after the surrender. The chaos of unhealthiness, in which Dr. C. found the city, was soon reduced to order and cleanliness. The sick and dying negroes were removed to hospitals outside of the town; the dead mules and other animals were buried or thrown into the river; the streets, lanes, alleys, cellars, and garrets were carefully and vigorously policed, and due attention was paid to the health of the citizens in every respect. A very few of the physicians remained and practiced their professions as before. Dr. C. is energetic and efficient, and performs his duties conscientiously. He is one of the few who had left the Slave States (Virginia) before the war, from feelings of repugnance to the "peculiar institution."

Dr. Powell is well known throughout the country as a contributor to the *Chicago Medical Journal*, and as a teacher,

formerly, in the "Rush Medical College," of that city. My impressions from the intercourse I had with all these gentlemen, are pleasant and lasting; and I shall long remember the laborious and exhausting service which we performed together before, during, and after the siege. Long live our faithful comrades of Vicksburg——and let me ask in conclusion, why have not some of them been promoted to higher stations, with the Generals and other military officers? Yours, etc.,

JAMES BRYAN, *Surgeon U S. Vols.*

141 MONTAGUE ST., BROOKLYN, Feb. 27, 1864.

Indigenous Drugs.—Now that almost every article of foreign production costs at least twice as much delivered in New York as it was sold for by the London dealer, the question naturally arises—Is there no possibility of our superseding articles necessarily imported from abroad by American productions thus reducing the now enormous cost of drugs to the consumer, and restoring the greatly reduced profits of the dealer? Against the attempt to bring in an indigenous plant for use in medicine, the traditional reputation of the old and long-tried *remedies* is constantly arrayed. The writings of physicians of half a century ago still furnish the staple of much of the teaching in our schools, and our text-books are occupied with elaborate descriptions of remedies, some of which are now rarely attainable, while their reputation is perhaps chiefly due to their having been "known to the ancients." The absurd adherence of our Pharmacopœia to scammony as an ingredient of our leading popular cathartic pills is an illustration of this conservatism, the practical operation of which is, that some of the officinal formulas are ignored by nine of every ten of the manufacturers who furnish our preparations; and the prices which pharmaceutists can afford to pay with a view to the popular demand being far below the possibilities of the case, we can no more blame the deficiency upon the manufacturer or upon the pharmaceutist than upon the physician or consumers themselves.

It is the misfortune of almost every good thing to be damaged by our zealous advocates, and it happens that, owing to the existence of the sect of the so-called Eclectic physicians, who seem to have founded their system of practice upon the narrow idea that a medicine must be of vegetable origin, and even that it must have grown on American soil, to merit their approval, the true importance of many of our indigenous rem-

edies has gained ground but slowly. The empirical processes of the Eclectic manufacturers, by which the attempt is made to reduce all the indigenous remedies to a uniform form of preparation, unwarranted by a scientific appreciation of their varied composition, has also stood in the way of their reputation. Many of the so-called concentrated remedies are far from representing the drugs from which they were obtained; and any estimate of the therapeutic value of those drugs founded upon experiments with the Eclectic resinoid principles obtained from them, is liable to their real uses and adaptations.

We believe that with scientific pharmaceutists mainly rests the work of bringing the numerous American drugs which are readily obtainable, and many of foreign origin which are capable of easy propagation on our own soil, to a fair trial upon their merits; and we would suggest that every effort in this direction is not only a good business move, but tends directly to promote the prosperity and independence of our own country, and to diffuse its rich and useful productions throughout the world.—*Am. Drug. Circular.*

Pulmonary Congestion in Children simulating the Early Stage of Phthisis.—In a lecture delivered at the Hôpital des Enfants Malades, M. Bonchut summed up his remaks in the following conclusions:—

There are cases of chronic pulmonary congestion which perfectly resemble, in their physical signs, tubercle of the lungs in its first or crude stage. These congestions are asthenic, and are readily cured by the use of sulphureous waters; while true tuberculosis is much less amenable to this treatment.

Chronic pulmonary congestion is observed in children as well as in adults; it is the result of acute congestion, of bronchitis, of pneumonia, either simple or attendant on measles, of rheumatic or herpetic bronchitis, or of pulmonary apoplexy, which has not been entirely recovered from.

A kind of chronic pulmonary apoplexy, characterized by infiltration, destroying the pliability of the lung-tissue, and increasing its density, constitutes the anatomical condition of chronic pulmonary congestion.

Chronic pulmonary congestion may exist alone, and may remain so without the development of tubercle; on the other hand, it is tolerably often only the first phase of phthisis. In the same way as there are chronic hyperæmic states of the glands in children, which may or may not be followed by tubercle, so pulmonory congestion may be found to constitute

the entire disease. Chronic pulmonary congestion must, however, always be looked on with suspicion, because it may be the origin of true phthisis.

Whatever be the nature of the induration of the lung—whether it be from congestion, exudation, apoplexy or tubercle—its effect will be to partially arrest the blood-changes, by impeding the access of air to the pulmonary vesicles, and will produce the same physical signs.

Chronic pulmonary congestion, in scrofulous patients, necessarily leads to phthisis; in plethoric, rheumatic, and herpetic individuals, it remains in the congested or indurated state until resolution takes place.

Nothing has so great a resemblance as chronic pulmonary congestion to the first stage of phthisis; for the physical signs are alike, and the general symptoms are almost the same. The physical signs of chronic pulmonary congestion are, relative dulness of the chest; weakening of the vesicular murmur; prolonged expiratory murmur; some mucous ronchi; and increased vocal resonance—signs generally held to be characteristic of crude tubercle in the lung. The general symptoms are cough, with or without expectoration; emaciation; and sometimes *malaise*, weakness, or a febrile state.

Chronic pulmonary congestion lasts from a few months to several years; but recovery generally takes place, unless the affection become complicated with tubercle. Pulmonary tubercle is very rarely recovered from: most of the alleged cases of recovery have in reality been cases of pulmonary congestion. The disease is more readily recovered from in rheumatic and herpetic than in scrofulous subjects.

The treatment should consist of cod-liver oil in the winter, and of quinine-wine and arseniate of soda in the summer; and the patient should be sent to the sea-side or to the country.—*Brit. Med. Jour.*, Sept. 12, 1863, from *Gazette des Hôpitaux*, 21 July, 1863.

Dietetic Treatment of Albuminuria.—The researches of M. Hamon, contained in a note on albuminogenesis communicated to the Académie de Médicine on the 29th April, 1862, appear to throw considerable light upon the question whether any kinds of aliment increase or diminish albuminuria He found, for instance, that soft-boiled eggs were very easy of digestion, and exercised a very slight albuminogenic influence, and it has therefore been suggested that in albuminuria an albuminous diet might be ordered, composed principally of soft-

boiled eggs and aluminous water. Vegetable diet has also been sometimes employed in albuminous anasarca, sometimes with partial, sometimes with perfect success. But all kinds of diet that have been adopted in albuminuria are inferior to that of milk, as recommended by M. Guignier. The latter physician adopts the treatment of albuminuria devised by M. Serres, and which is founded on the combination of three plans—namely, the diminution of drink, the milk regimen, and the use of raw onions. The plan consists in choosing the milk with great care as to its freshness and quality, in substituting one milk for another when the first disagrees with the patient, allowing the patients to determine the quantity they drink, uniting lime or magnesia with the milk when it causes acidity and abandoning the treatment at the end of twenty days, if it has not produced a decided good effect. M. Guignier believes that the diuretic property of the raw onion has a beneficial effect upon the disease, and that these vegetables ought to form part of the milk regimen. The editor of the *Bullétin Général de Thérapeutique* thinks that albuminuria may be cured by dietetic means, if they are adopted early, when the effusions are recent, and before the albuminuria has lasted long enough to have produced in the renal tissues the organic changes which place the case beyond the hope of cure.—*Brit. and For. Med-Chir. Rev.*, July, 1863, from *Bul. Gén. de Théra.*, March, 1863.

BOOK NOTICES AND REVIEWS.

Proceedings of the American Pharmaceutical Association at its 11th Annual Meeting, Held in Baltimore, Md., Sept., 1863. *Also the Constitution and Roll of Members.*

This is a very interesting work of more than three hundred pages, issued by J. B. Lippincott & Co., of Philadelphia. The report on the progress of Pharmacy is an epitome of much useful knowledge, and is the more valuable from indicating the works that treat of the different articles that are passed in review. The Committee on the Drug Market, acting under instructions "to report on the fluctuations in the supply and demand of Drugs, their variations in quality and adulterations and sophistications," have made a report on their examination of a few articles of prime pharmaceutical and medicinal importance that will scarcely increase the confidence of physicians

in the purity and activity of the medicines they prescribe. We quote the report on Sarsaparilla: "During the past year, the market has been repeatedly searched, in vain, for a single parcel, no matter how small, of the true Rio Negro Sarsaparilla. This, the most valuable, if not the only valuable variety of Sarsaparilla, has entirely disappeared from the market, and would probably be forgotten in the channels of trade, except that some of the makers of syrups and extracts still represent their preparations as being made from it."

Of seven specimens of Æther Fortior, two are reported as officinal and right in all important respects, and five as unfit for use. Of ten specimens of Chloroform, "not one was up to the standard in freedom from foreign compounds, though five were so nearly up to it as to be considered very good. The remainder were less clean, though, with one exception, not very unclean. One was very bad, unfit even for external use." The report concludes, "Neither the pharmaceutist nor the physician should ever permit chloroform to be used as an anæsthetic without first submitting it to the officinal tests." The "Proceedings" give us pleasing evidence of the vitality of the Association and of the good it is accomplishing to Pharmacy and Medicine.

A Treatise on Human Physiology; Designed for the use of Students and Practitioners of Medicine. By John C. Dalton, Jr., M. D. 3d Edition. Revised and Enlarged. Blanchard & Lea. 1864.

This work, recognized as a standard text-book by the medical schools, and with which the members of the profession are so familiar, demands but a brief notice. Its popularity is attested by the rapidity with which former editions have been exhausted. The following extract from the preface to the present edition indicates the changes that have been made in the work: "The improvements and additions which have been introduced consist in the incorporation into the text of certain new facts and discoveries, relating mainly to details which have made their appearance within the last three years. Such are the experiments of the author with regard to the secretion

and properties of the parotid saliva in the human subject, and the quantative analysis of this fluid by Mr. Perkins; the valuable observations of Prof. Austin Flint, Jr., on Stercorine, Cholaterine, and the effects of permanent biliary fistula, and those of Prof. Jeffries Wyman on Fissure of Hare-lip in the Median Line, from arrest of development."

Enlarged and Revised to 1864. *The Medical Formulary.* Being a collection of Prescriptions, derived from the Writings and Practice of many of the most eminent Physicians in America and Europe, etc., etc., etc. By Benjamin Ellis, M. D., late Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy. Eleventh Edition. Carefully Revised and much Extended. By Robert P. Thomas, M. D., Professor of Materia Medica in the Philadelphia College of Pharmacy. "*Morbos andene non eleqventia sed remedis curarè.*"—Cels. De Med , Lib. 1. Philadelphia. Blanchard & Lea. 1864.

We sometimes hear objections urged to the use of printed formulæ, as unworthy the attention of an educated physician; insisting that as the phases of disease are varied almost infinitely, so should the prescriptons vary also, and that this can only be done at the bed-side of the patient. This may be true to some extent, in theory, but in practice a large majority of the members of the profession frankly confess that the elegant and judicious formation of prescriptions is one of the difficulties which the young practitioner of medicine is obliged to encounter. And we are free to say that he must be a most accomplished physician who can glean no new or valuable idea from the "Medical Formulary."

That this work is highly esteemed by the profession throughout this country is manifest from the fact that we have before us the Eleventh Edition. The work was undertaken to aid the young practitioner in his first experiences, to furnish models for extemporaneous formulas, the proportions of which may be increased or diminished according to the age, sex, constitution or idiosyncrasy of the patient, all of which are to be taken into consideration, as well as the climate and peculiar epidemic which may be prevailing.

"It contains in a condensed form, and we think advantageously arranged, many of the most important prescriptions employed in modern practice."

"The application of remedies to diseases has been generally left to the judgment of the practitioner, and therapeutical detail as much as possible avoided, as it would have been inconsistent with the nature and design of the work."

The arrangement of the book is based on Chapman's old classification, so that we not only have elegant models of prescriptions furnished us, but these models presented in classes, which are of themselves a sort of suggestive system of Materia Medica.

We cordially endorse the favorable opinion which the profession has for so long a time entertained of this work, and commend it as worthy a place in the library of every physician.

Medical Publications Received.—

Twenty-First Annual Report of the Managers of the State Lunatic Asylum for the Year 1863. Transmitted to the Legislature of New York. 1864.

Eleventh Annual Meeting for the Years 1861-2, *and* 3, *of the Illinois State Medical Society.* Held at Jacksonville, May 5th, 1863.

The New York Medical Independent and Pharmaceutical Reporter. Weekly, at $2,00 per annum.

The People's Journal of Health. Edited by Justin Hayes, M. D., and C. R. Blackall, M. D. Chicago.

Laryngoscopal Medications. By Louis Elsbery, A. M., M. D.

The following obituary of Dr. York has been kindly furnished us by his intimate friend, B. F. Swafford, M. D., of New Goshen, Ind.

Dr. Shubal York, died by the hand of an assassin, at Charleston, Illinois, March 28th, 1864.

Dr. York was born in Randolph County, North Carolina, about the year 1816. His parents, though respectable, were in moderate circumstances; hence all the education they were able to give their son was such as the common schools of the country afforded. Young York emigrated with his parents to Illinois, in the year 1834; taught school for a while, and then entered the office of Drs. Steele & Willard as a student of medicine. After a course of office instruction he began practice in 1840, without taking his degree; he, however, graduated at the Cleveland Medical College, some years later, with high honors.

Both in his profession and in the sciences which go to make up a sound education, Dr. York was a man of extensive learning; in the former he was decidedly a progressive man, always fully up to times, and gathering information from every available source. On the breaking out of the rebellion Dr. York took decided grounds in favor of his country, left his lucrative practice and quiet home to accept a position as Surgeon of the 54th Ill. Vol. Infty., which position he held with honor to himself and advantage to the service until his death. Dr. York was plain in his dress, temperate in his habits, unaffected in his manners, in conversation witty and vivacious, as an orator, eloquent and pungent, as a debater, adroit and logical.

But it was in private life where he manifested those qualities which won him so many friends; whether we consider him as a Christian, a citizen, or a humanitarian, we find him discharging all duties with a conscientiousness rarely met with among men. Though he now sleeps peacefully in the last resting place of man, his memory will ever be cherished until those who knew him sleep with him. We can only say, Devoted Christian, Generous Friend, Courteous Gentleman, farewell.

Death of Dr. O. L. Leonard.—At the meeting of the Chicago Medical Society, on Friday, April 1st, the following resolutions were adopted:

Whereas, in the order of Divine Providence, our friend and colleague, Dr. O. L. Leonard, has been called from our midst,

Resolved, That, while deploring his death, as the loss of a Christian gentleman, and a kind and faithful fellow laborer, we bow with humility before the will of Him who is alike infinite in wisdom and beneficence.

Resolved, That we recognized in our departed Brother those honorable and noble qualities of the mind and heart that endeared him alike to his family, his patients, and his confreres.

Resolved, That we hereby tender our heartfelt sympathies to the family of our deceased associate.

Resolved, That the Secretary of this Society be directed to present a copy of these resolutions to the relatives of the Deceased, and to request their publication in the Medical Journals and the newspapers of this city.

E. Marguerat, M. D., *Sec'y.*

DEATH OF DR. FRANKLIN BACHE.—Our readers will hear with regret of the demise of this distinguished physician and chemist, which occurred at his residence in Philadelphia on Saturday afternoon, March 19th. Dr. Bache had been ill but about a week, and had shown no symptoms of declining health until the attack which terminated his long and useful life. He delivered his full course on chemistry in Jefferson Medical College during the past winter, and was even present at the party given to the graduating class on the evening of the 10th of March. By his death the medical profession loses one of its brightest ornaments, a man pre-eminently distinguished for his sterling integrity and uncompromising adherence to truth —the first requisites in a man of science. Dr. Bache was born in Philadelphia, October 25, 1792; he graduated as bachelor of arts in 1810 at the University of Pennsylvania, and four years afterwards took his degree in the medical department of the same Institution.

He served several years in the army as surgeon, and afterwards commenced practice in Philadelphia, occupying several medical positions, and lecturing from 1826 to 1832 in the Franklin Institute of Philadelphia. In 1831 he succeeded Dr. Wood as Professor of Chemistry in the Philadelphia College of Pharmacy, Dr. Wood being transferred to the chair of Materia Medica. The intimacy formed betwe n these two eminent men led them to co-operate in the production of a much needed work for which they possessed remarkable qualifications, and in 1833 the United States' Dispensatory appeared. Its success, and the manner in which it has informed and educated the physicians and pharmaceutists of the United States, are matters of history. The U. S. Dispensatory, after numerous revisions, continues now the indispensable handbook of every pharmaceutist and physician in this country, and is widely diffused in Europe and wherever the English language is read. In 1841 Dr. Bache wes elected Professor of Chemistry in the Jefferson Medical College, a position he occupied till the time of his death. He also enjoyed many evidences of the esteem of his fellow-citizens and the profession; was an ex-President of the American Philosophical Society; Vice President of the College of Physicians of Philadelphia, and President of the Deaf and Dumb Asylum.

Dr. Bache was the eldest son of the eldest grandchild of the great Dr. Franklin, and inherited some of the traits of his illustrious ancestor, which will place his name in a high position among American Philosophers.—*Am. Drug. Circular.*

J. W. W. GORDON'S

SPRING VACCINATOR

We solicit the attention of Physicians to this ingenious instrument, of simple construction, cutting the skin and inserting the virus in one operation, which is instantaneous. It has met with the unqualified approval of every Physician who has used it.

BALTIMORE, MD., Nov. 19, 1863.

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2d. The operation is sure to succeed when the virus is good and the system in a suitable condition, as the matter is deposited in immediate contact with the absorbents, where it must remain, there being no hemorrhage to remove it, neither can it be affected by friction on the arm, which the patient is so apt to indulge in after the operation.

3d. It is admirably adapted to timid children, the operation being instantaneous, and accompanied with so little pain as in many instances not to disturb children when asleep.

4th. It is of inestimable value by enabling the Physician to determine whether the operation is successful, for this reason: the wound inflicted by the instrument is so trivial, that the too early appearance of inflammation would prove to be the result of spurious matter or of a vitiated system.

Very respectfully,
S. T. KNIGHT, M. D.,
Health Commissioner.

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ORIGINAL COMMUNICATIONS.

ALPHABET OF AUSCULTATION.

By TOM. O. EDWARDS, of Lancaster, Ohio.

The following short alphabet of auscultation has afforded me much advantage in studying diseases of the chest, and is I think, of sufficient interest to young beginners for publication.

Two dry sounds—Rhonchus and Sibilus.

Two moist sounds—Small and Large Crepitation.

Three vocal sounds—Bronchophany, Œgophany, and Pectoriloquy.

Rhonchus, or Snoring, found in large Bronchia, is produced by intumiscence or œdema of the mucous membranes of bronchii, on which phlegm impinges—found at the bifurcation of the bronchii. This sound indicates Bronchitis and is illustrated by the effused condition of the conjunctiva in conjunctivitis.

Sibilus, Wheezing, Whistling, or Cooing, is found in small Bronchia, and is as piccoli to bassoon—air drawn through the semi-closed, wet lips indicates this, while snoring illustrates Rhonchus.

Small Crepitation invariably attends pneumonia, and is the

result of air passing through inflamed air-cells, clogged with sero sanguinolent secretions—rubbing the hair between the fingers illustrates the sound—also found in emplyrema and in a lung wounded from fractured ribs.

Large Crepitation, is like the breaking of large soap-bubbles, is found behind in lower lobes, in advanced bronchitis, and in third stage of pneumonia, and in emphysema, with œdema pulmonum.

Bronchophany, is increased resonance of voice, is produced by solidification of lungs, acting as a better conductor of sound than a healthy or vesicular portion. If from pneumonia, behind in lower lobes, if from tubercles, under clavicle.

Œgophany, or bleating of a goat, results from a small portion of affused lymph between the surfaces of the costal and pulmonary pleura, and is evidence of pleurisy—bad symptom in early pleurisy, good in advanced stage, showing effusion is being absorbed—found in lower lobes, behind the seat of pleurisy.

Pectoriloquy, the effect of the intonation of the voice passing up the stethoscope, as if it came directly from the chest. It is an unequivocal evidence of a cavity—generally in upper lobes, under the clavicle. It is simulated by placing the instrument on the wings of the thyroid cartilage and making the patient talk. These are the alphabet of auscultation, and however, imperfect, will greatly aid the beginner whose mind is apt to be filled with many indefinate phrases.

AMERICAN MEDICAL ASSOCIATION.

The 15th Annual Meeting of the "American Medical Association" will be held in the City of New York, commencing on Tuesday, June 7th, 1864, at 10 o'clock A. M.

GUIDO FURMAN, M. D., Secretary.

New York, March, 1864.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE CORNEA—ACUTE INFLAMMATION.

GENTLEMEN:—You have seen many cases of inflammation of the cornea, accompanying or following diseases of other tissues of the eye, especially of the conjunctiva. In a large proportion of cases this inflammation—technically called Corneitis or Keratitis—is a secondary disease. It is occasionally, however, idiopathic, and suddenly attacks the cornea of a patient, apparently in good health, in the same way that inflammation, after an exposure to changes of temperature, may attack the lungs or pleura.

Acute Keratitis, to which I wish to call your attention today, is far less common than the chronic form of inflammation induced by a scrofulous diathesis. By acute inflammation of the cornea I mean that form of disease which more or less suddenly attacks the whole or a part of the cornea, and terminates within a period of less than four weeks, in recovery or destruction of the parts affected, or becomes chronic. The precise limits between the acute and chronic stages of a disease are not always easily defined, and the division of diseases of the cornea into chronic and acute is perhaps not very practical, and yet, by this division, I think I can best assist you in understanding what you will hereafter read on the subject in larger works.

Acute Keratitis presents the following symptoms, each more or less marked in different cases. There is an opacity of greater or less extent, produced as I have already described in a previous lecture, by a peculiar change in the cells of the cornea. This form of opacity must not be confounded with the opaque cicatrices of former ulcers, which will hereafter be described.

If the disease progresses, the opacity usually becomes either an ulcer or on abscess. I have already informed you how an abscess may become an ulcer. There is pain, which is usually neuralgic in character, not only in the eye but around it; there is often a sensation similar to that produced by a particle of sand under the lids; one of the most constant symptoms is photophobia, with an involuntary tendency to keep the lids closed. The vessels of the conjunctiva and sub-conjunctival tissues are very often congested.

The chief causes of acute corneitis are mechanical injuries, and exposure to changes of temperature. The presence of a scrofulous diathesis, however slight, is a predisposing cause. The pain is sometimes so severe, and the intolerance of light so great, that it is impossible, especially with children, to gain a satisfactory view of the cornea, without the assistance of chloroform. With this agent a careful and thorough examination can be made

In speaking of the treatment of acute corneitis, I shall only call your attention to a few of the leading principles in the therapeutics of three distinct classes of the disease. 1st. Simple inflammation, which does not tend *speedily* to form either ulcers or abscesses. 2d. Ulcerative inflammation. 3d. Purulent inflammation—abscess. Although cases often present so many complications that it is difficult to classify them, still, if you constantly retain in mind a distinct idea of these three groups, you will have little difficulty in comprehending all cases you may meet.

According to my experience, inflammation of the cornea, except in patients of a bad diathesis, is amenable to treatment, although the effects of the disease, in the form of cicatrices, often remain for life.

In the first class of cases, which, possibly with more exactness, may be styled subacute, the patient will complain of more or less indistinctness of vision, with slight photophobia, as shown by the tendency to close the lids in strong lights. An examination will disclose a haziness of the cornea varying

in different cases in extent and depth. This marks the limits of the inflammatory process in the cells of the cornea. Sometimes the inflammation subsides, leaving no trace behind. Or it may continue a long time without the formation of ulcers or purulent deposits, and in the form of simple opacity become chronic. In other cases the destruction of tissue either by ulcer or abscess follows at an early period.

In treating these cases it is all important to remove the cause. Unfortunately it is sometimes difficult to discover the ætology since not only individuals are attacked who have received injuries of the cornea, who have suffered from changes of temperature, and who are evidently of an unhealthy diathesis, but also those in whom no such causes can be found. Two of the most abstinate cases of this form of corneitis, I ever observed, were in patients apparently in perfect health.

Everything irritating to the eyes must be avoided. As certain diatheses are strong predisposing causes of corneal affections, it is necessary to correct them by suitable remedies. Nutritious diet, sufficient exercise and pure air are indispensable. In very many cases cod-liver oil, with small doses of iodide of potash, are indicated. Constipation should be overcome and yet care is required in the use of cathartics. Very small doses of calomel or hyd. bichlo. are sometimes beneficial. In many instances nothing is required locally. Usually however, a slightly stimulating collyrium will hasten the absorption of the products of inflammation. For this purpose a solution of arg. nit., gr. i—iv to ℥i applied once or twice daily, is suitable. This treatment is usually sufficient in simple cases.

But sometimes from the onset all the symptoms are very violent. The opacity of the cornea becomes rapidly more and more dense, the pain in and around the eye becomes so severe as to prevent sleep, the conjunctiva is congested, and the secretion of tears much increased. It will be observed that the opaque portion of the cornea soon begins to slough. The tissue has lost its vitality and in some respects resembles the

slough produced by a moxa. A line of demarkation is formed, the slough, composed of disorganized cells, shreds of intercellular tissue and pus cells, is slowly cast off, leaving an ulcer, which may progress, perforating the cornea, causing a prolapse of the iris, or heal, leaving an opaque cicatrix.

The treatment in this second class of cases must also be directed, as above mentioned, to the general health. The patient should be confined to a room of moderate temperature, and sufficiently shaded. The excruciating pain should be relieved by suitable doses of morphine, and by the local application of atropine as prescribed in a previous lecture. This acts not only as a local anodyne, but also, I believe, as a curative agent in subduing inflammation. If the sensation of heat is a marked symptom the *constant* application of cold compresses is advisable; otherwise I think frequent tepid bathings are preferable. The application of ung. hyd. with ext. belladonna or atropia, is apparently sometimes beneficial. I have often in the West found quinine so beneficial, even where malaria symptoms were not well-defined, that I feel disposed to prescribe it in nearly all these cases. Other Oculists have also found it efficacious. As the symptoms improve, mild astringent collyria are beneficial.

In the third class of cases, those in which the inflammation is confined to the deeper layers of the cornea, tending to produce collections of pus, either in the form of abscess or of onyx, the treatment must be conducted upon the same general principles as in the cases just mentioned. It is remarkable how rapidly the pus of an abscess or onyx may be absorbed spontaneously. As I have already told you, an abscess may sometimes discharge its pus into the anterior chamber and there be absorbed. I advise you to study the application of paracentesis of the cornea. This little operation is performed not only to afford an exit for the pus but also to discharge the aqueous humor, which reduces the pressure upon the cornea, and allays inflammation.

A guarded prognosis should be given in all cases of acute

corneitis since vision is often permanently obstructed by opaque cicatrices of the cornea, even where there has been no extensive destruction of tissue.

A CASE OF PERFORATION OF THE INTESTINE.

By W. D. SLAYTER, M. D., of Chicago.

Graduate Royal College of Physicians of England, Royal College of Surgeons of London and Dublin. Late House-Surgeon of Westminster Hospital, London.

The following case, I think, will be of some interest to the profession, as showing, first, how very slight the symptoms, in some cases of abdominal injury, are in comparison to the extent of the injury received; second, how guarded the surgeon ought always to be in making his diagnosis and prognosis in such cases. In this case almost the only symptom present which pointed to some very extensive injury was, the state of the pulse—it ranging from 100 to 140 beats in the minute.

At first, probably, there was merely contusion of the intestine, but subsequently ulceration and perforation took place, which caused death on the ninth day from the receipt of the injury. Without any further remarks, I will give a brief outline of the case; and it will be seen that it was impossible to form any positive diagnosis from the symptoms present.

Dudley Wells, æt. 36, admitted into the accident ward of the Westminster Hospital June 18th, 1861. His friends stated that when returning from the Volunteer Rifle Review in Hyde Park, and while crossing Westminster Bridge, his horse took fright, reared, and fell backwards, the rider being under the animal, and the pommel of the saddle striking him in the abdomen. He was immediately carried to the Hospital, and with the assistance of a friend walked from the Surgery to the Ward, a distance of fifteen or twenty yards. When I saw him on admission I found him suffering from some mental excite-

ment, perspiring freely, skin very hot, pulse quick; but there was no pain or prostration present. On attempting to pass urine, he found that he was unable to do so; a catheter was passed and nearly a pint of clear urine drawn off, showing, that although the abdominal muscles had been paralyzed by the shock, still the bladder itself had not been ruptured.

On further examination there was found an extensive bruise of the lower part of the abdomen, extending from one iliac process to the other, attended with considerable pain on pressure. He was ordered to take ʒj of the liq. opii sed., and to have hot flannels sprinkled with tinct. opii applied to the part. This treatment relieved him very much, and he slept well for some hours, but as he was unable to void his urine, a catheter was passed twice a day.

For two days he progressed favorably, but on the morning of the third he woke up complaining of violent twisting pain in the right side, accompanied by great tenderness—pulse 135, and small. A 5 gr. pil. sapon. com. was administered, which relieved him very much. For five days he was kept constantly under the influence of opium, but the pulse continued to range from 130 to 140, and very small and thready.

On the ninth day he complained of excruciating pain in the same situation; another dose of opium relieved him, but about six, P. M., on turning in bed very suddenly, he felt something give way internally, immediately alarming symptoms of prostration came on, and four hours afterwards he was dead.

Throughout the whole time he took beef tea, brandy and egg, etc., but the bowels were not once moved, nor did they seem at all inclined to act, and as it was evident some serious injury had been done to the intestine, it was deemed imprudent to attempt to disturb them.

A post-mortem examination was made twenty-four hours after death, when a hole about the size of a silver quarter of a dollar, with clean cut edges, was found in the jejunum, one foot from the duodenum; lymph had been thrown out around the ulcer, causing that part to adhere to the other intestines.

All the other viscera were healthy; the inflammation seemed to be confined to the immediate neighborhood of the sore. The sudden turning in bed on the 9th day, I presume, tore apart the adhesions and this caused death from prostration.

DIPHTHERIA, AND ITS TREATMENT.

By F. R. MAILLARD, M. D., of Beetown, Wis.

Messrs. Editors:—A non-professional reader of almanacs and medical journals would imagine that nothing new could be written on the subject of Diphtheria. As proof that such is not the case, see a letter from C. D. Meigs, in the *American Journal of the Medical Sciences* for Jan., 1864, from which we of the West have gained some new light. Professional courtesy requires us to believe that Dr. Meigs describes Diphtheria as *he sees* it, and gives the treatment *he* has found most successful. If so, Diphtheria in Philadelphia, and Diphtheria in Wisconsin differ widely in symptoms, and in each locality demands an entirely different treatment. I propose to note a few of the symptoms as I have *felt* them, and as I have observed them for the last four years, and then give the treatment I have found the most successful. Of its origin and cause I shall say nothing, and but little of its nature.

Diphtheria, or Diphtheritic Fever, naturally divides itself into three stages, first, an intermittent; second, a continued; third, a typhoid stage. In the first stage, Diphtheria is as certainly a periodic disease as is miasmatic intermittent. The premonitory symptoms are those which belong to fever generally. The fever usually commences, and is always highest, near midnight, and there is generally a slighter exacerbation about noon. The febrile action may be slight, and hardly noticed, or severe, causing delirium. Sometimes there are three or four exacerbations before the patient will confess to any soreness of the throat, but then they are always slight. If the

patient is capable of answering you understandingly, he will, almost always, refer his most acute pain to the articulation of the atlas with the cranium. In this stage, be the fever slight or severe, it is *sthenic*. It is said that, "in some cases it assumes the typhoid grade from the first." This is possibly so, but in my experience, which now extends to between two and two hundred cases, I am not absolutely certain that a single case *commenced* with that grade, though many cases when first seen, were decidedly *asthenic*.

In the second, or continued stage, the fever is more or less remittent, and may be decidedly sthenic, and is always accompanied by soreness of the throat, swelling of the glands about the angle of the jaw, and the peculiar exudation or deposit on the fauces.

The third, or typhoid stage, has been so well and often described that it is useless to try to better it. The peculiar exudation on the fauces is not more characteristic of Diphtheria, than is the condition of the secretory organs generally. The urine is decreased in amount, and often albuminous. The bile is always vitiated, and the liver generally sluggish, and occasionally in the later stage enlarged, as I have verified by post-mortem observation. That it is not a local disease is proven by the fact that general, always precedes the local symptoms.

Let us, now, lay aside all ideas of a relationship between Diphtheria and Scarlatina, or Rubeola, and see what we are to do for a case of this disease. The first question is, can we arrest it, or will it run a certain course, and then terminate of itself? There is no doubt that some patients will recover without any treatment, and even in spite of bad treatment. But it is equally true, that some will die, treat them as you will. If we assume that the patient cannot be cured, then our only course is to sustain him, and watch the fight. In what I have denominated the first and second stages, it may, in the vast majority of cases be arrested, and that almost as suddenly and as certainly, as intermittent from miasmatic causes. The first case of Diphtheria that I ever treated, or ever saw, oc-

cured in myself. Here was a splendid chance to experiment, and I used it. I was satisfied that I required a powerful alterative. Authorities said "they must not be used. The disease is asthenic. The treatment is, *caustics* and *stimulants* locally; *stimulants* and *tonics* internally." Well, I run the gauntlet of caustics, from burnt alum to caustic potash, and of local stimulants, from sol. of chlor. potassa to a strong sol. of nit. arg. Internally, pot. chlor. quinine, tinct. ferri chlor. and whiskey punch, with an occasional opiate to procure rest. In spite of it all the disease extended to the posterior nares, and I became convinced that something must be done.

I therefore, threw aside everything *but the punch*, and as I was too weak (as I thought) to stand a course of mercury, ordered a sol. of iodide potassa, ℥j of the salt to a fl ℥j of water. Of this I took ℥j every four hours, using the same as a gargle, and injecting it into the nares. At night took gr. viij of dover's powder, and slept for a few hours, when I was awakened struggling for breath. I seized a pair of curved forceps and literally tore a passage for breath. This I repeated two or three times a day for some days, using nothing but the whiskey punch, iodide potassa and opium. Convalescence was slow, and the Schneiderian membrane has never *fully* recovered.

This experience effectually *cured* me from withholding alteratives when indicated. In the first stage the object should be to prevent its passing to the second. This we shall accomplish by overcoming the torpidity of the secretory system, and exciting the excretory to an equal degree, while at the same time we endeavor to give tone to the system of organic life. If the attack is severe, nature often gives us a hint as to the first step to be taken. She produces emesis. If she has not done this, and the patient is of good constitution, I give a full dose of ipecac, and as soon as convenient, follow by sub. mur. hg. gr. v. An hour after give a pill composed of sub. mur. hg., gr. j; ext. belladonna, gr. ⅛; and repeat every hour till it operates freely as a cathartic, or the specific effects of the

belladonna are induced, when they are discontinued, and sulp. quinine given, in doses sufficiently large and often, to induce its specific effect, before the time for the next exacerbation of the fever. Patients usually want something done locally, and of all the caustics, washes, and gargles that I have used, none has satisfied me as well as a gargle of equal parts of water and tinct. guiac, used several times a day. If this does not check the advances of the deposit, the same course is pursued the next day, only omitting the emetic, when in the vast majority of cases the patient is dismissed.

The second stage does not last long, hence, what you do, must be done quickly. The indications are not materially different. The same treatment, (omitting the emetic,) is very often all that is required to check the fever, and arrest the deposit on the fauces. I seldom repeat the mercurial the third time, but if anything more is needed give quinine in solution with tinct. ferri chlor. If there is much excitement of the nervous system give tinct. belladonna in sol. of pot. chlorat., always insisting on the patient taking sufficient nourishment.

In the third stage, if the mercurial is given it must be with caution, and the powers of life sustained by every means at our command.

This is an outline of the treatment I have found most generally successful. But no general rules will apply to each particular case, hence the intelligent physician will always, from the general, deduce the particular rules, applicable to each individual case. If the physician will bear in mind that he has to deal with a disease, essentially periodic in its nature, he will hardly err in giving the quinine. The amount of the belladonna sometimes has to be varied several times in the same case, and occasionally cannot be borne at all. The same is true of the mercurial. If it increases the nervous sensibility, or excites the pulse, discontinue it immediately. Since it has become so decidedly fashionable to mention *calomel* only to curse it, you will perhaps allow me to aver that when the object is to influence the secretory functions with promptness

and certainty, the Materia Medica has as yet, furnished me nothing equal to the mercurials. The reason why I prefer belladonna to any other narcotic, is that it will as generally quiet the nervous symptoms, as any of them, and it acts upon the whole excretory system, while it in a great degree counteracts the tendency of the mercurials to produce salivation. Though this is not a local disease, local treatment is not unimportant, for it is the absorption of vitiated secretion from the diseased surface, that causes the typhoid symptoms of its later stage. When no local treatment is used, we occasionally see the fever abate, and the false membrane nearly all thrown off, but a few patches remain and so does the peculiar sickening odor of the breath. As long as this remains, the patient is not free from danger. When in this stationary condition the guaiac gargle will, often in a few hours, clear the throat, and the odor at the same time disappears.

Another advantage it has seemed to me to possess, viz., preventing that most troublesome sequela, paralysis of the parts concerned in deglutition and speech. Under every other local application that I have used, paralysis more or less complete, has occasionally occurred but never when the guaiac has been faithfully employed.

If what I have written should induce even a few of the readers of the *Journal* to *observe* Diphtheria for *themselves*, (and publish their observations, too,) regardless of the almost interminable mass of dogmatism which has been promulgated by American as well as European writers, I shall have accomplished all that I wished, and this truly fearful disease will not prove as fatal in their practice as it has in the country generally, for the past few years.

A CASE FOR ARGUMENT.

By M. M. EATON, Peoria, Ill.

October 30th, 1863, I was called to attend Mrs. R., a German lady, residing near this city. Having been previously consulted I knew that she was about to be confined, and I at once, in some haste, drove to her residence, being more prompt than usual on account of having been called some two years since to perform the operation of turning and delivering her —she having been under the care of Dr. ——, of this city, for about twenty hours before I was called. She had never had a living child though thrice pregnant.

As it happened, however, there was no need of haste, for I found the os uteri only slightly dilated: She was in a good condition every way so far as I could learn, and I left the case to nature. The pains increased, and after three hours, judge of my surprise, (after having examined her several times without detecting anything abnormal,) to feel what seemed to be a fœtus partly projecting through the os. I made slight traction and the mass slipped through, and truly it was a fœtus of about two months' development. The pains now ceased for an hour, when they came on and, in about three hours, she was delivered of a full-grown child, weighing eight pounds. The child gasped, but all efforts to establish respiration were fruitless. I took the fœtus home and placed it in alcohol, with my collections, it being to me a case of interest.

P. S.—Was she fecundated at two different times, or only once; the fœtus from some cause, being arrested in its development? The latter is my view. M. M. E.

The question of our correspondent was one of interest, the solution of which was surrounded with difficulties, while the Decidua was considered a new formation, completely closing

the openings into the uterus. But by the demonstration that the decidua is the hypertrophied mucous lining of the uterus, the idea of the physical barrier to superfœtation has been removed. Numerous accidental causes may arrest or limit the nutrition of the fœtus in utero. And either of these circumstances will account for cases like that reported in the above communication, equally well.—[*Editors Journal.*]

INFLAMMATION OF THE MUCOUS SURFACE OF THE FAUCES.

By G. D. WINCH, Asst. Surg. 36th Reg. Wis. Vols.

Camp Randall, Madison, Wis.

For the last four weeks we have been overrun with sore throat. It occurs in those who have been exposed, by being on guard or standing on inspection without overcoats. The symptoms are, a feeling of dryness in the throat, little tenderness by external pressure, difficulty of swallowing, constant coughing, no acceleration of the pulse except in severe cases, no loss of appetite, but the pain in the parts is continued and severe.

Now in treatment of these cases, I have watched carefully, the effects of remedies. Sulph. Zinc, acetas plumbi, chlorate potassa, and capsicum have no effect in curing the disease. Such cases will recover as soon without treatment as with the above remedies. There is an irritability that keeps up the inflammation that they do not blunt. But let the saturated solution of argenti nitratis (forty grains to the ounce,) be applied, and after two applications the irritability is reduced, inflammation subsides, and the parts soon become normal.

With the above treatment, use measures to not have the patient's throat exposed to the cold air.

SELECTED.

ON THE TREATMENT OF RHEUMATIC FEVER.

By WILLOUGHBY F. WADE, M. D., M. R., C. P
Senior Physician to the Queen's Hospital, Birmingham.

[*Concluded.*]

So great is the constitutional irritation, that rheumatic fever has been treated exclusively by opium, and this in large quantities, for the disorder establishes an extraordinary tolerance of the drug. Dr. Corrigan, of Dublin, is the present supporter of the plan. I have myself given it a very fair trial, but I cannot acquiesce in his faith in its efficiency. It is true that it tranquilizes and solaces the sufferer, and in many cases rest and diluents may during this time effect a cure; but on the other hand, I have seen patients lying for days semi-narcotized, the rheumatic fever itself undiminished. It may, nevertheless, be well-conjoined with other more efficacious methods, when the patient is unusually irritable, restless, or incapable of enduring pain, whilst these are working a cure. At the same time I rarely find it necessary to use it; and, as a rule, it is desirable to simplify, and not to complicate, treatment or multiply drugs, else it becomes difficult to distinguish their effects.

The treatment so far indicated does but pave the way for that which is to exercise a speedy and unerring influence upon the course and duration of the disorder. As soon as the patient has taken the powder above directed, he is to commence the use of the following:—Nitrate of potash, ʒj; acetate of potash, ʒiij; water, ℥viij; ℥j for a dose. This is to be repeated every two, three, or four hours, according to the urgency of the symptoms. At the same time the patient is to be kept upon slops, and supplied with copious libations of barley, toast, or plain water, thin gruel, weak broths, and so on.

The result of this treatment is, that the urine is increased in quantity and becomes less acid, the nervous irritation is soothed, the heart's action quieted, the arthritic effusion dimin-

ished, the pains are allayed; and all this in from twenty-four to seventy-two hours. The patient is often so much relieved by the first night, that he is pleased and comforted by the improvement, and is content without any anodyne, lying quiet and composed, though very likely unable to obtain much or at all events uninterrupted sleep.

Other saline remedies will, I believe, produce similar effects. Thus, Dr. Todd, recommends bicarbonate and nitrate of potash; Dr. Weber, bicarbonate of soda; Dr. Garrod, bicarbonate of potash; Dr. Fuller, a mixture of several salts. Lemon juice alone is employed by Dr. Owen Rees, who believes that its oxygen is directed to those tissues, the *im*perfect oxydation of which develops the rheumatic poison. Be that what it may lemon-juice is often efficacious; but my experience of it coincides with that of those who have found it uncertain, and therefore unreliable. I have been so satisfied with the results obtained from the use of the nitrate and acetate of potash since I first employed them, that I have rarely tried any similar drug. The only objection to this mixture is that it sometimes gripes, an unpleasantness which may always be corrected by increasing the quantity of water in which it is administered, or adding to it a little compound tincture of cardamoms. The remarks above made regarding lemon-juice apply also to colchicum, which has the further disadvantage of being oftentimes violent and distressing in its action.

It is quite true that steady persistence in the use of whichever we may select of these salines will be followed in from twenty-four to seventy two hours by a very considerable alleviation of the symptoms, both local and general; and further that this amelioration will sometimes progress till a perfect cure ensues. But it is a peculiarity of rheumatic which does not pertain to most other idiopathic fevers, that there is constant tendency to relapse, and this relapse occurs either before the cure is apparently complete, or even after that period. A rheumatic fever of six weeks' duration is not one and indivisible like a typhoid or typhus fever, but rather a succession of rheumatic fevers linked together by periods of partial recovery—i. e., it is a series of relapses; if not of relapses, of migrations, one joint getting well while another becomes inflamed. This *erratic* character of rheumatism is most prone to manifest itself in persons who are anæmiated or debilitated from any cause. It may be that it simply wanders from joint to joint, one not getting well till another is invaded; or it may happen that all the joints get well for a period; or again it

may happen that all the joints get partially well for a period, and then occurs a relapse. Again, it may happen that whereas for a day or two the patient makes a steady progress towards recovery, yet after that time the disorder comes to a halt. The remedies which for a time seemed to be acting so well, cease to exert any influence. This, I say, will occur under any of the methods which may be classed together under Dr. Todd's group of "eliminative plans."

To show the frequency of these relapses, I quote from several recent authors who have recorded cases for various purposes but none of them avowedly with the intention of exemplifying this particular point. Of 10 cases related by Dr. Bennett ("Principles and Practice of Medicine"), 3 had relapses. Out of 5 cases mentioned by Dr. Todd, 2 had relapses, and 1 lingered on without change for two weeks. Out of 6 cases narrated by Dr. Fuller, 2 relapsed. Out of 23 cases recorded by Dr. Whitley, which were treated by various physicians of Guy's Hospital, 9 had relapses (one of them two); and a 10th case seems to have had one, but the record is not explicit.

Dr. Basham records 65 cases of acute arthritic rheumatism, and of these 9 had relapses, some of them having had several. Judging from other circumstances, I should think it probable that these nine had become almost if not quite convalescent before that attack which was termed a relapse; if so, it is not unfair to assume that many more had relapses before recovering pretty completely from the first invasion.

Of course the secondary attacks varied much in severity, but they present instances of pericarditis, pleurisy, and irritis, either constituting or attending the relapse, and then occurring for the first time.

It is unnecessary to multiply proofs of the tendency to relapse which I have alleged to be characteristic of this complaint, since of 109 cases 25 relapsed—some several times. Here, then, is a feature which demands our most earnest attention, since its pernicious tendencies are bu inefficiently opposed by any recognized plan of treatment. How are we to meet this difficulty?

Rheumatism, whether acute or chronic, like its congener, gout, is more prone to wander in persons whose constitutions are enfeebled; and, as I have already pointed out, many of these patients have suffered from anæmia from a date long antecedent to their arthritic affection. Here, then, seems a plain indication for treatment: support and corroborants—meat, wine, steel, quinine, bark, and so on. The first case

which strongly enforced this view upon my mind was that of a girl whom I had charge of at the General Hospital some years ago. It was one of those cases in which the symptoms, though not *very* severe, were yet persistent, although migratory. She was evidently anæmic. One day, she asked for a glass of wine, and I gave it to her; the next day she was better, and I continued to give her two ounces of wine daily, and from that time she steadily convalesced.

Iron is a "strengthening" remedy, but as a rule it is not well borne by a pyrexial system, and it commonly checks secretion, so that it must be used cautiously in the rheumatic habit. When I was in Paris in 1851, M. Briquet, of the Charité, was engaged in making experiments and observations upon the administration of quinine in acute cases of this fever. He had not finished them when I left; but I had seen quite enough to convince me that it was no sheet-anchor when given from the first in all cases, and I had also seen enough to convince me that cases so treated would some of them get well almost by magic. A much older physician than M. Briquet —Dr. Haygarth, a man of celebrity in his time—was in the habit of treating all his cases from the first with bark. Here is an important fact. It is quite true, as Dr. Fuller points out, that published records of his cases indicate that bark is not a safe remedy when thus used; still the fact remains that Dr. Haygarth treated 121 cases with bark (more or less completely), and was at the end a most strenuous advocate of the plan.

When, then, my attention was first directed to the necessity of preventing relapses, quinine presented itself to my mind as promising to be an efficient agent.

Dr. Fuller uses quinine earlier than most other persons, and the few cases he has published seem to my mind indicative of its utility. His remarks upon it are as follows:—"In my own practice bark has never been given at such an early (from the third to the tenth day) period of the disease, nor have I often seen it so administered by others; but I have repeatedly watched its administration at a later period, while the tongue has still continued furred, and the pulse excited; and it has been so constantly followed by a fresh accession of mischief, that I have been deterred from making use of it until the urine has cleared or has dropped its sediment, the pulse has become soft, and the tongue moist and almost clean." Of quinine he says, it "is more readily and earlier tolerated: and as it is quite as efficient as bark, it should certainly have the preference when the *eruption of sudamina*, the character of the

pulse, or the *cleaning of the tongue*, appear to demand or admit of the exhibition of a tonic. It should be used as a corrective or restorative of the processes of assimilation when the febrile paroxysm is beginning to abate, rather than as a cure during the active stages of the disease."

If, however, we wait till the tongue is quite clean, or the urine normal, and the fever gone, or sudamina are developed, we shall wait in many cases till a relapse, affecting perhaps the pericardium or pleura, has occurred. Nor can we tell beforehand, with anything like certainty, in what cases this will or will not happen.

The plan which I have adopted for some time, then, has been to administer from two to four grains of quinine every three or four hours, *as soon as ever there is a distinct remission in the symptoms:* this happens, as I have said, in from twenty-four to seventy-two hours after the commencement of the treatment. At this period, however, the patient is far from convalescent. The joints, probably, are still painful and swollen, though less so than at first; the pulse perhaps is still quicker than natural, yet it has come down 10 or 15 beats; the tongue is moist and cleaner, though still perhaps loaded with fur.

But whilst I use the quinine in this way to prevent a relapse which occurs more or less decidedly in 25 out of 109 cases treated in the ordinary way, I cannot trust to it to eliminate the residue of the rheumatic poison in the body, nor to eliminate that small quantity which continues to be formed whilst the quinine is producing its effect, which latter seems to me to be antagonistic to the production of the rheumatic poison. I therefore, whilst giving the quinine every four hours, continue the use of the potash mixture night and morning; and I give of it one or two ounces, according to the fever, pain, and swelling still existing. On the same day that I begin the quinine or on the next, I allow the patient some meat, and, if he be evidently feeble, a glass or two of wine. The meat I do not press upon him, but if he desires to have it he has it.

When the rheumatism is quite gone, I generally employ steel, and usually in the form of iodide of iron, the iodine acting gently on the excretory organs, whilst the iron helps to restore the blood-globules, so often, as we have seen, deficient. If one or more joints seem to progress less rapidly than the others, it is useful to apply a small blister, as recommended by Dr. Todd; and during convalescence, if any remain, as they often do, stiff and perhaps a little swollen, I paint them

with that application common in most hospitals under the name of pigmentum iodinii. Having employed this plan for some years in both public and private practice, I can strongly recommend its adoption, and the more confidently since it has proved as efficacious in the hands of others as in my own.

TRICHINIASIS IN GERMANY.

In the original department of this number will be found an interesting account, by a correspondent, of the recently discovered disease produced by the presence of Trichinæ in the human system. The *British Medical Journal* for Jan. 16th, 1864, contains some additional details, which we transfer to our pages, as we are confident they will interest our readers.

"A few months ago, there was a festive celebration at Hettstadt, a small country town near the Hartz Mountains, in Germany. Upwards of one hundred persons sat down to an excellent dinner, and, having enjoyed themselves *more majorum*, separated, and went to their homes.

"Of these one hundred and three persons, mostly men in the prime of life, eighty-three are now in their graves; the majority of the twenty survivors linger with a fearful malady; and a few only walk apparently unscathed among the living, but in hourly fear of the outbreak of the disease which has carried away such numbers of their fellow-diners.

"They had all eaten of a poison at that festive board, the virulence of which far surpasses the reported effects of *aqua tophana*, or of the more tangible agents described in toxicological text-books. It was not a poison dug out of the earth, extracted from plants, or prepared in the laboratory of the chemist. It was not a poison administered by design or negligence. But it was a poison unknown to all concerned; and was eaten with the meat in which it was contained, and of which it formed a living constituent.

"When the festival at Hettstadt had been finally determined upon, and the dinner had been ordered at the hotel, the keeper of the tavern arranged his bill-of-fare. The introduction of the third course, it was settled, should consist, as usual in those parts of the country, of *Rostewurst und Gemuse*. The *Rostewurst* was, therefore, ordered at the butcher's the necessary number of days beforehand, in order to allow of its

being properly smoked. The butcher, on his part, went expressly to a neighboring proprietor, and bought one of two pigs from the steward, who had been commissioned with the transaction by his master. It appears, however, that the steward, unfortunately, sold the pig which the master had not intended to sell, as he did not deem it sufficiently fat, or well-conditioned. Thus the wrong pig was sold, carried on a barrow to the butcher, killed and worked up into sausages. The sausages were duly smoked and delivered at the hotel. There they were fried and served to the guests at the dinner-table.

"On the day after the festival, several persons who had participated in the dinner were attacked with irritation of the intestines, loss of appetite, great prostration, and fever. The number of persons attacked rapidly increased; and great alarm was excited in the first instance by the apprehension of an impending epidemic of typhus fever or continued fever, with which the symptoms observed showed great similarity. But when, in some of the cases treated by the same physician, the features of the illness began to indicate at first acute peritonitis, then pneumonia of a circumscribed character, next paralysis of the intercostal muscles and the muscles in front of the neck, the hypothesis of septic fever, though sustained in other cases had to be abandoned with respect to these particular cases. Some unknown poison was now assumed to be at the bottom of the outbreak; and an active inquiry into all the circumstances of the dinner was instituted. Every article of food and material was subjected to a most rigid examination, without any result in the first instance. But when the symptoms in some of the cases invaded the muscles of the leg, particularly the calves of some of the sufferers, the description which Zenker had given of a case of fatal trichinous disease was remembered. The remnants of sausage, and of pork employed in its manufacture, were examined with the microscope and found to be literally swarming with encapsuled trichinæ. From the suffering muscles of several of the victims small pieces were excised, and under the microscope found charged with embryonic trichinæ in all stages of development. It could not be doubted any longer, that as many of the one hundred and three as had partaken of *Rostewurst* had been infested with trichinous disease by eating of trichinous pork, the parasites of which had, at least in part, escaped the effects of smoking and frying.

"This awful catastrophe awakened sympathy and fear throughout the whole of Germany. Most of the leading phy-

sicians were consulted in the interest of the sufferers, and some visited the neighborhood where most of the afflicted patients remained. But none could bring relief or cure. With an obstinacy unsurpassed by any other infectious or parasitic disease, trichiniasis carried its victims to the grave. Many anthelmintics were arrayed to destroy, if not the worms already in the flesh, at least those yet remaining in the intestinal canal. Picric acid was employed until its use seemed as dangerous as the disease; benzole, which had promised well in experiments upon animals, was tried, but was unavailing. As case after case died off, and the dissection of each proved the parasites to have been quite unaffected by the agents employed, the conviction was impressed upon every mind that a man afflicted with flesh-worm is doomed to die the slow death of exhaustion from nervous irritation, fever, and loss of muscular power, in systems essential to existence.

"But medical science had only just unravelled a mystery; and if it could not save the victims, it was determined at least to turn the occasion to the next best account. The cases were, therefore, observed with care, and chronicled with skill. All the multifarious features of the parasitic disease were registered in such a manner, that there can hereafter be no difficulty in the diagnosis of this disorder. A valuable diagnostic feature was repeatedly observed—namely, the appearance of the flesh-worm under the thin mucous membrane on the lower side of the tongue. The natural history of trichina in man was found to be the same as that in animals.

"All observations led to the conviction that the trichina encapsuled in the flesh is in the condition of puberty. Brought into the stomach, the calcareous capsule is digested with the flesh, and the trichina is set free. It probably feeds upon the walls of the intestines themselves; for the irritation of the intestines begins before the bringing forth of young trichinæ has taken place. Copulation is immediately effected; and within a few hours, or a short portion of days, from sixty to eighty live embryos leave the female, and begin their own career of destruction.

"This consists, in the first instance, in an attempt to pierce the walls of the intestinal canal. Great inflammation of the entire surface ensues, ending not rarely in death of the villous or mucous membrane, or in the formation of masses of pus on its surface. Sometimes there are bloody stools. But these severe symptoms only ensue when much trichinous meat has been eaten. When less has been consumed, pain and uneasi-

ness in the abdomen are produced, accompanied, however, in all instances, by wasting fever and prostration. The embryos actually pierce the intestines, and are found free in the effusion, sometimes serous, sometimes purulent, which is always poured out into the abdominal cavity. Thence they again proceed towards the periphery of the body, pierce the peritoneum, causing great irritation, and sometimes peritonitis, to the extent of gluing the intestines together to a coherent mass. They next proceed to the muscles nearest to the abdomen; arrived at the elementary muscular fibres, which, under the microscope, appear as long cylinders with many transverse striæ, they pierce the membranes, enter the fibres, eat and destroy their striated contents, consume a great part of the granular detritus, moving up and down in the fibres until grown to the size necessary for passing into the quiescent state. They then roll up in spiral or other irregular windings, the bags of the muscular fibres collapse, and only where the trichinæ lie a calcareous mass is deposited, perhaps by the trichinæ themselves, which hardens into perfect capsules round the parasites. A muscular fibre may harbor one or several parasites; but every fibre invaded by a single parasite loses its character entirely, and becomes a bag of detritus from one end to the other.

"If it be remembered that one ounce of meat filled with trichinæ may form the stock from which, in a few days, three millions of worms may be bred; and that these worms will destroy in the course of a few weeks not less than two millions of striated muscular fibres—an idea of the extent of destruction produced by these parasites can be formed. We are not in a position to say to what proportion of the fifty or sixty pounds of muscle required for the performances of the human body these two millions of elementary fibres actually amount. In the muscles nearest to the abdomen, the destruction is sometimes so complete, that not a fibre free from parasites can be found. This amounts to complete paralysis. But death is not always produced by the paralysis; it is mostly the result of paralysis, peritonitis, and irritative fever combined. No case is known in which trichiniasis, after having declared itself, became arrested. All persons affected have either died, or are in such a state of prostration that their death is very probable.

"Most educated people in Germany have, in consequence of the Hettstadt tragedy, adopted the law of Moses, and avoid pork in any form. To some of the large pig-breeders in West-

phalia, who keep as many as two thousand pigs, the sinking of the price of pork has been a ruinous—at the least, a serious —loss. In the dining-rooms of the hotels in the neighborhood of Hettstadt, notices are hung up announcing that pork will not be served in any form in these establishments. To counteract this panic, the farmer's club of the Hettstadt district gave a dinner at which no other meat but pork was eaten. But it has had no appreciable effect. The raw ham and sausages of Germany are doomed to extinction. The smoked and fried sausages must necessarily be avoided. * * * *

"In the South of Germany, some people now say that the Hungarian pigs are most frequently affected with trichinæ. This rumor, like the famous pork dinner of the farmer's club, may, however, have been set up with the intention of quieting apprehension about the native pigs. We have already mentioned the accident which befell the crew of a merchant vessel. They shipped a pig at Valparaiso, and killed it a few days before their arrival at Hamburg. Most of the sailors ate of the pork in one form or another. Several were affected with trichinæ and died. Of those whose fate could be inquired into, one only seems to have escaped the parasites. Another outbreak in Saxony has carried away twelve persons. A fourth wholesale poisoning by trichinæ is just reported from Offenbach, the Birmingham of Hesse-Darmstadt. Of upwards of twenty persons infected, three had already died when our correspondent's letter left. Numerous sporadic cases of fever, and epidemics of inscrutable peculiarity, but referred to an anomalous type of fever, are now claimed by medical authors, and with much show of reason, to have been outbreaks of trichiniasis, or flesh-worm disease. Several German physicians experimentalized with a view of finding a cure for this terrible disorder. Professor Eckhardt, at Giessen, we are told, has obtained permission to try the disease and supposed remedies upon a murderer under sentence of death. We have not been told whether his reward in case of success is to be a commutation of his capital sentence; but should hope this to be the case. The experiment, even if it should not have the romantic character indicated, will probably teach some curious details of the life of these parasites. Almost everywhere, the commonest rules of cleanliness are disregarded in the rearing of pigs. Yet pigs are naturally clean animals, avoiding, like dogs and cats, all contact with ordure. Though they burrow in the earth, and in summer wallow in the mud, they abhor the heaps of excrements mixed with straw in and upon which

they are frequently kept. A due regard to cleanliness will prevent trichinæ in the pig. In wild boars, of which many are eaten in the country round the Hartz Mountains, trichina has never been found. Neither has it been met with in sheep, oxen, or horses. Beef is the safest of all descriptions of meat, as no parasites have ever been discovered in it. They have also never been found in the blood, brain, or heart, of those animals in whose striated muscles they love to reside."—*Am. Jour. of Med. Sciences.*

MALE FERN IN TAPE WORM.

Dr. Alexander Fleming gives the following as his result of his extensive therapeutical inquiries as to the usefulness or otherwise of the oil of male fern in tapeworm, and the best mode of exhibiting the drug. These inquiries embrace 100 cases.

Sex. Of these 100 cases, 30 were males, and 70 females.

The remarkable preponderance of the female sex among the subjects of tapeworm, here shown, and, as I believe, for the first time on numerical data, is full of interest in relation to the cause of the disease, and most deserving of further inquiry. The great majority of the cases embraced in this report are taken from hospital out-patients, among whom the women suffer frequently from dyspepsia, very much more so than do the men; and we can readily understand how the "measle" will have a higher chance of escaping death in a weak stomach, and subsequently making a home for itself in the bowels. As respects the diet itself, the risk run by men must be greater than that by women; as they eat a larger proportion of animal food, and, in Birmingham especially, of pork.

Our returns show that the male fern, as a remedy, is of equal efficacy in both sexes.

Age. The age of the patient is not mentioned in 8 of the cases. Of the remaining 92, the average age of all, in round numbers, is 29; of the females, 30; of the males, 28. The returns include cases of all ages except infancy, and prove that the oil of male fern is an efficient remedy as well in the child as in the adult. A child of 1 year and 11 months is the youngest, and a woman aged 69 the oldest example. The exclusive milk diet of infants, and consequent freedom from the cause of the parasite, explains their immunity from tapeworm.

The Duration of the Disease is not given in 33 cases. Of the remaining 67, it is stated to vary from a few days, as in 4 cases in Dr. Anderson's schedule, to 36 years, as in the example reported by Mr. Anderton. There are 11 cases whose duration varies from 6 weeks to 10 months; 16 are reported of one year's duration; 9 of 2 years; 4 of 5 years; 3 of 7 years; 3 of 10 years; 1 of 12 years; 1 of 14 years; 2 of 20 years; and 1 of 36 years. The returns show that the oil of male fern has been as efficient as a remedy in cases of long standing as in the more recent.

Previous Treatment. In 35 of the cases, it is stated that there was no previous treatment. Among the remedies which had been used in the others, kousso was employed twice—once with, and once without success. Turpentine had been given on fifteen occasions—seven times with, and eight times without success. The oil of male fern had been previously used five times—three times with, and twice without success. In one of those cases where it had failed, it was subsequently given in mixture with milk, in the mode which I have suggested, and with perfect success.

Dose, Time, and Mode of Administration. Dose. The medicine has been administered in doses of a few minims, of half a drachm, of one drachm, one and a half, and of two drachms. The returns show that one drachm is a sufficient dose; at least, in the great majority of cases. The larger doses more frequently excite sickness, vomiting and diarrhœa.

Time. In many of the cases, the oil was given in the morning; in a greater number, at bedtime. The results of the two methods, when compared together, do not show any material difference in success. I prefer to give the drug at bedtime, because the patient should continue to fast for eight or ten hours after taking it; and it is easier to do so during sleep than waking.

Mode. In 47 of the cases, the oil was given with milk, in the manner which I had myself suggested in the observations which accompanied the schedule. The following is the formula referred to:

"Mix well of oil of male fern one drachm, and mucilage half an ounce. The draught is mixed with one ounce and a half of sweet milk, and taken at bedtime; the patient having omitted the dinner and evening meal of that day. Taken thus, on an empty stomach, the mixture is speedily carried into the intestines, to feed, and at the same time poison, the hungry parasite which nestles there. Milk is the favorite food of the

worm. Next morning, a dose of castor oil may be given. If necessary, this medication may be repeated daily, one, two, and three times, or until the worm is discharged."

In the remaining cases, the drug was given without milk, in mucilage or some aromatic water. In nearly all these cases comprised in the returns, care was taken to give the remedy on an empty stomach. The two classes of cases, therefore, or those in which the male fern was given with milk, and those in which milk was not used, admit of a fair comparison; and of the higher efficiency of the first of these methods of exhibition the returns are conclusive. So given, the drug acts more quickly, and at the same time more efficiently. The proportion of failures is nearly the same with both methods; but the length of worm discharged, and, so far as we can judge, the thoroughness of the cure, predominate in those cases where milk was used.

Physiological Effects. Sometimes the medicine operates without pain or nausea; more often, there are sickness, griping pains, and purging. Vomiting is reported in ten of the cases. Dr. Bree observes that under its use, the urine was usually loaded with lithic acid. In one of Dr. Anderson's cases, the menses, which had been absent for several months, returned after the use of the oil. The vomiting and purging were caused frequently by the second dose, after the worm had been discharged; and must be ascribed to the action of the drug itself on the gastro-intestinal mucous membrane—not, as some have thought, to the dying struggles of the poisoned worm, though it may be that these play some part in their causation.

In five of the 100 cases, the worm was discharged alive. Except that it was expelled with unusual speed, I cannot trace any circumstances to account for the living state of the parasite in these examples.

The largest portion of tapeworm which is reported to have been passed, is fifteen yards. This was in Dr. Bennett's case. No mention is made of any other species of tapeworm than the tænia solium. Large round worms were discharged in two cases.

The worm was, for the most part, expelled after the first dose, but in a few cases not till after the second or third dose. The worm was often passed before any purgative was taken, and separately from the ordinary evacuation. In one instance recorded in Mr. Thompson's schedule, the worm was discharged upwards by vomiting. This was the case of a female aged 40,

who had suffered many years from tapeworm. She took one drachm of the oil of male fern in milk, according to my formula; and, in the course of an hour, vomited a very long tapeworm, which was quite dead. None passed by stool. After two days the draught was repeated, and she passed a large quantity of dead and broken tapeworm. The patient had previously taken various remedies without success. In Dr. Anderson's schedule, the case of a girl aged 18 is narrated, who became very sick after taking two drachms of the oil of male fern in milk, and vomited a large round worm. She was afterwards purged smartly, and passed a quantity of joints of tapeworm.

The average time which elapsed between the administration of the oil and the expulsion of the parasite was six hours. It was discharged in half an hour in seven cases, in one hour in nine cases, in two hours in six case, in three hours in three cases, in five hours in six cases. The longest interval mentioned is twenty-four hours.

In several of the cases the worm was passed in a broken and softened state. In these cases, a considerable interval had elapsed between the taking of the oil and the expulsion of the worm, the softened condition of which was probably due to a more or less complete digestion of the already poisoned and dead worm.

The head is reported to have been found in three cases (schedule of Mr. Spencer); but, in one of these, its discovery rests only on the authority of the patient. It is generally thought that the rarity with which the head is obtained is due to its not being killed and detached with the body; but it seems improbable that the poison should take more effect on the body than the head of the creature, and which it meets first in its passage downwards from the stomach. According to Dr. Nelson, the food is taken in chiefly by the head. I am more inclined to refer the rare discovery of the head to its solution in the digestive fluids. Thin and delicate, it must be easy of digestion. Moreover, placed higher up in the canal, it is in closer proximity to the more active solvent juices. The thin and translucent neck, though found more often than the head, is also generally absent; and probably for the like reason. I am disposed to refer relapses to the growth of other worms, which have escaped the poison, and not to the resprouting of the old head.

Duration of the Cure. Though relapses often occur, there is reason to believe that the cure is permanent in a large proportion of the cases. The length of time (one year) assigned to

his inquiry, and the difficulty of ascertaining the future history especially of hospital patients, render the returns in reference to this important point unavoidably of less value than we could desire. I may mention in this place, that Mr. Osborn in a note to his schedule, states that two cases of tapeworm are known to him, both females, of 38 and 17 years of age respectively, where the oil of male fern was used with success, and where the patients remained, to his knowledge, well for many years.

In concluding this report, it is only just to remember, in connection with our subject, the early labors of Peschier, of Geneva, and dating so far back as 1830, but which had been almost overlooked in England until Dr. Christison, in 1853, gave the sanction of his authority to the results of Peschier's trials. The later experiences of Drs. Gull, Jenner, Bennett, Willshire, Ransome, and others, have abundantly confirmed their observations, and; conjoined with the results of the present inquiry, establish beyond doubt the great efficacy of oil of male fern in tapeworm, and its superiority to the other known remedies of this disease. Further, our report points very decidedly to the most efficient mode of exhibiting the drug; and the whole inquiry has, as I have reason to know, rendered excellent service to therapeutics by making the virtues of the oil of male fern more widely known and employed through the profession.

It remains only for me to offer my best thanks to all the gentlemen who made returns to me, for their valuable aid in this inquiry.—*British Med. Journal*, Jan. 16, 1864.

VARICOSE VEINS.

Mr. Skey remarked (*Lancet*, Jan. 2, 1864), that the treatment of varicose veins involves two objects: "1st, the increase of power to these organs; and 2d, the turning the current of the venous circulation into healthier channels. The first is effected by the liberal administration of nutrio-stimulants. The second object has tested the inventive faculties of many surgeons. I leave it to others to commend the various schemes adopted by them. I discountenance, from long observation of its incompetency to cure, the employment of the needle, whether through the vein or under it, single or double. It

has these objections: 1st, it is not unattended with danger; and 2d, it fails to obliterate the vein, except at the point of its application, mainly because the applications cannot be safely made in numbers proportionate to that of the veins affected. I have at present, in St. Bartholomew's Hospital, a woman, under treatment for varicose veins in the leg, whose limb was jeopardized by the employment of the needle a year ago. A long illness, with severe inflammation and extensive abscesses followed. The same limb is again under treatment for the original disease. There is no danger in making any number of small eschars on the most projecting surfaces of varicose veins, if made with an escharotic composed of two-fifths of pure potash and three-fifths of powdered lime. This powder well combined, is made into a paste with alcohol. Whether other escharotics are dangerous in their operation on veins I do not stop to inquire; I only know that the Vienna paste, combined as I have above described it, is not. These eschars may be made in any number proportionate to the extent of the disease. I have treated perhaps 250 cases in the course of the last ten years, and I continue to treat them, by the same means. The paste is applied over the most projecting part of the vein in the following manner; through a series of about four layers of adhesive plaster, a circle is cut of the size of a threepenny-piece or smaller. The influence of the escharotic extends through the vein; and it is curious to observe that from the hour of its application the entire vein appears to be obliterated, and is undetectable to the finger on pressure. From ten to twenty-five eschars may be applied between the ankle and the knee. Twenty minutes suffice for the full operation of the escharotic, and an average of one month for the cure. In very weak constitutions the ulcers will heal very slowly, unless well-directed efforts be made to give force to the general system."—*Am. Jour. of Med. Sciences.*

THE GUTTA PERCHA TREE.

The tree called the Isonandra Gutta, which furnishes the gutta percha, is a native of the Indian Archipelago and the adjacent islands. A few years since this substance, now of such widely extended use, was totally unknown in Europe, for though from time immemorial the Malays employed it for

making the handles of their hatchets and creeses, it was only in the year 1843, that Mr. Montgomery, an English surgeon, having casually become acquainted with its valuable properties, sent an account of it, with samples, to the Royal Society, for which he received its gold medal. The fame of the new article spread rapidly throughout the world; science and speculation seized upon it with equal eagerness; it was immediately analyzed, studied, and tried in every possible way, so that it is now as well known and as extensively used as if it had been in our possession for centuries. The Isonandra Gutta is a large high tree, with a dense crown of rather small, dark-green leaves, and round smooth trunk. The white blossoms change into a sweet fruit, containing an oily substance fit for culinary use. The wood is soft, spongy, and contains longitudinal cavities filled with brown stripes of gutta percha. The original method of the Malays, for collecting the resin, consisted in felling the tree, which was then placed in a slanting position, so as to enable the exuding fluid to be collected in banana leaves. This barbarous proceeding, which, from the enormous demand which suddenly arose for the gutta, would soon have brought the rapidly rising trade to a suicidal end, fortunately became known before it was too late, and the resin is now gathered in the same manner as caoutchouc, by making incisions in the bark with a chopping-knife, collecting the thin white, milky fluid which exudes in large vessels, and allowing it to evaporate in the sun, or over the fire. The solid residuum which is the gutta percha of commerce, is finally softened in hot water, and pressed into the form of slabs or flat pieces, generally a foot broad, a foot and a half long, and three inches thick. Gutta percha has many properties in common with caoutchouc, being completely insoluble in water, tenacious but not elastic, and an extremely bad conductor of caloric and electricity. The uses of gutta percha are manifold. It serves for water-pipes, for vessels fit for the reception of alkaline or acid liquids which would corrode metal or wood, for surgical implements, for boxes, baskets, combs, and a variety of other articles.—*Hartwig's Tropical World.*

ON A NEW MODE OF APPLYING ATROPINE.

By JULIUS HOMBERGER, M. D.

In the last number of the first volume of this Journal I have alluded to the efficacy of applications of sulphate of atropine, in substance, into the eye, in all those cases which indicate otherwise repeated instillations. The use of solutions of atropine, as well as atropine ointment, and even Streatfield's atropine paper, will, I think, henceforth be limited to the dilatation of the pupil in ophthalmoscopic examinations I have since that time experimented with atropine on all my patients in the solid form only, and I must state that the results have been such as to justify the most enthusiastic recommendations. The dilatation of the pupil produced in eyes without disease of the iris, in cases of keratitis, wounds of the cornea, etc., etc., etc., lasts usually from four to five days. The quantity of atropine placed into the lower palpebral sac seems to have a decided influence on the duration of dilatation of the pupil. The following is an instance of this long action: By mistake, I had put atropine in the sound eye of a patient, who applied for treatment, and when, fifteen minutes later, I found the error, the pupil was considerably dilated. I applied the atropine to the diseased eye, and in order to neutralize the effects of atropine on the good one, I put a square of Calabar-bean paper in the latter. The pupil became smaller, after about twenty minutes; but the patient returned in the evening, with a pupil as large as before. I sacrificed, during the succeeding three days, eight squares of the Calabar-bean paper, which is, at the present moment, such a treasure in this country, as not to be freely dealt with, and the dilatation always returned, and had only entirely disappeared when I saw the patient on the seventh day. There is no doubt that the large quantity of atropine, taken endosmatically into the humors of the eye, was the cause of this remarkably long-lasting effect; and I suppose that the rapid dilatation of the pupil, by detachment of posterior synechies, which I obtained both in cases of chronic and acute iritis, with not more than one application daily, must be attributed more to the reception of the alkaloid into the humors and tissues, from where it exerted a continual action on the iris, than to the sudden effect of a high dose of the rem-

edy. That the active principles of the Calabar bean contract the pupil momentarily, may be easily explained. It may be supposed that the endosmotic process is more active, through the cornea than through the sclerotic, and that, therefore, the atropine contained in the aqueous humor is neutralized, and, after having received an overbalancing quantity of the active principles of Calabar bean, acts on the iris, while, after some time, the larger quantity of atropine, yet contained in the vitreous humor and the other tissues, neutralizes the Calabar bean, and again produces dilatation of the pupil. I have seen that, within two days, and with only one application of atropine daily, large adhesions of the iris were torn from the anterior capsula, sometimes leaving there intensely black spots, and effused lymph, the former of which derived their origin from the uveal surface of the iris. In one case of syphilitic iritis, two *nodi*, situated near the pupillar margin, and which had resisted the first applications of atropine, though the rest of the iris had been considerably retracted, were removed, about one line towards the periphery, on the fifth day. This is the more remarkable, as their size had not diminished during that period, and the inflammation was yet considerable.

It cannot be questioned that it is much easier to introduce a solid particle into the eye, than to introduce a square bit of paper; that the latter can sometimes not be removed without the aid of forceps; that the lids of iritic patients have, sometimes, to be kept open for a considerable time, while the paper is removed, in spite of the patient's sensitiveness to light; and that in a certain number of cases the patients complain of the slight irritation produced by the paper. While these little inconveniences do not appertain to the application of atropine in substance, which is rapidly dissolved, and felt only for a moment as a foreign body, I think, particularly, the circumstance hat it is possible to conveniently saturate the tissues and humors of the eye, with the remedy, will render this method also of greater therapeutic value.

It may be set down as a fundamental point in the treatment of iritis that the dangers of this disease, for vision, consist *merely in the formation of adhesions between the iris and anterior capsula.* During the acute stage of the disease, the adhesions threaten to glue the pupillary margin to the capsula. Either, if lymph is effused into the pupillary space, the eye becomes useless by closure of the pupil, after the acute symptoms have subsided, or the synechies become the points of origin of a chronic process, which very frequently leads to

a number of complicating changes in the choroid, ciliary body, and lens, almost certainly fatal to vision.

The danger of the formation of synechies is, therefore, of primary importance in the treatment of acute iritis; in fact, a case of this disease can only be considered as cured if no adhesions are left after the inflammation is gone. The first object of the oculist treating this malady must therefore be to dilate the pupil, at all hazards. To rely on the removal of adhesions by constitutional medication, and to be satisfied with a mercurial treatment, with instillations of atropine three, or four, or six times daily, would not be judicious, in my opinion. The application of the mydriatic *coup sur coup* is the source of considerable irritation to the eye, and, on the other hand, the resorption of the fluid with the tears, through the lachrymal canal, exposes the patient to the danger of poisoning, to the same extent, as the application of atropine in substance.

The method of treating iritis, which I would propose, consists in the introduction of the fortieth part of a grain of atropine, in substance, into the lower conjunctival sac, which can be easily done by placing the salt, with a probe, on the everted lower lid. The patient is kept for half an hour under observation. Dryness in the throat is a usual effect of the application of the drug, which soon passes away; only if further symptoms (congestion to the head, paralysis of the m. protrusor urinæ) should approach, it will be necessary to give to the patient, internally, one-sixth to one-third of a grain, or a subcutaneous injection of one-eighth to one-fourth of a grain of the sulphate of morphine. Though I have but twice been obliged to resort to these means of counteraction, I consider it necessary to have them always on hand.

It will be well to examine the patient some hours after the application. If the pupil has enlarged considerably, one application daily will soon bring about dilatation, and no further treatment will be necessary, particularly in cases of a non-specific nature. If the enlargement is noticeable, but of little extent, or if there is no change, another application is made with the same care, and the case re-examined the following day. On the second day, those cases which do not present a marked increase of the size of the pupil, are, according to the current rules, subjected to the action of mercury, to depletion, paracentesis of the anterior chamber, or Iridectomy. Those, on the contrary, where the pupil has become larger, are treated with atropine exclusively, and only those where marked constitutional syphilis exists, submitted to a mild mercurial

treatment. In this manner a number of patients, in whom it is not easy to determine whether the ocular disease be specific or not, escape the necessity of mercurial medication. I have sometimes found, in mild cases where syphilis existed, the pupil dilated on the second day, and the inflammation diminished: so that, for experiment's sake, I cured the disease locally, before I submitted the patient to an anti-syphilitic course of treatment. The application of atropine, in substance, may well, in my opinion, supersede all other modes of using this remedy. Their energy and permanence of effect are incontestable. They irritate the eye less than collyria, and the whole of the remedy used comes into action; their use is even more convenient than that of atropine paper, and the dangers which also exist when collyria are applied *coup sur coup*, do not fall heavy in the balance.—*Am. Jour. of Ophthalmology.*

EDITORIAL AND MISCELLANEOUS.

Etherization Followed by Death.—At the meeting of the Imperial Society of Medicine in Lyons, on July 20, M. Chassagny communicated the case of a lady, aged 40, to whom æther was administered previously to the removal of an urethral polypus and two sebaceous cystic tumors on the head. Thirty *grammes* of æther (rather less than an apothecary's ounce) were used; but the anæsthesia produced was incomplete, and the patient was aware that the operations were being performed. The administration of the anæsthetic was not pushed further, because the stage of excitement did not manifest itself, and because, on the contrary, general coldness and slowness of the pulse were present. On the completion of the operation, which occupied a quarter of an hour, vomiting set in; the coldness increased, and was accompanied by clammy sweats; and the patient had convulsions, attended with foaming at the mouth. The attack passed away in a few moments, but soon returned with equal intensity. After the fourth attack, the patient died. M. Chassagny considered that the patient had died of eclampsia induced by etherization, which was thus the indirect cause of death.—*Brit. Med. Jour.* from *Gaz. Med. de Lyon*, 16 October, 1863.

This accident occurred but a few days before our visit to the city of Lyons, and was then the topic of conversation in all circles. When it is remembered that the French seldom administer anæsthetics to produce complete loss of consciousness, that the agent is as carefully prepared there as in any part of the world, that patients to whom it is administered are usually selected with care,—and still that fatal results follow its use there as elsewhere, the profession may well pause, as they do at present, to enquire, whether any means may be adopted to obviate, if not absolutely, at least the frequent occurrence of these tragic results. Doubtless the danger depends in part upon the impurity of the specimen used, but quite as much depends upon the incautious and too rapid administration.

In our use of anæsthesia, which has been somewhat extensive and frequent, we have yet to meet the first alarming occurrence. We have believed that *rapid* introduction of the agent into the system would account for the dangerous symptoms that sometimes so suddenly and unexpectedly arise.

This case demonstrates also that the use of æther, like chloroform; is not unattended with danger, when care is not exercised in its administration.

The American Journal of Ophthalmology.—This Journal commences its second volume as a quarterly. It is edited by Julius Homberger, M. D., New York. It contains much that is of great interest to the general practitioner, while to the oculist, a publication like this, must be indispensable. We reproduce in our present issue the article on the application of Atropine, by the editor. We commend the Journal to the profession, especially to those who devote themselves to the treatment of Ophthalmic diseases.

McMunn's Elixir of Opium.—*Does it possess any superiority over other preparations of Opium?*—A correspondent in the *Philadelphia Med. and Surg. Reporter*, for February,

gives the original formulary for making this preparation, so much vaunted as containing all the good qualities of the drug without any of its deleterious properties. Based on the testimonial of J. R. Chilton, M. D., the advertisements in the leading Medical journals of the country, the prescriptions of eminent physicians, it has become exceedingly popular, yielding immense profits to the manufacturer.

In the *N. Y. Medical Independent*, Prof. Percy has demonstrated that the "Elixir is nothing more than a solution of impure morphia," and from careful observations, that it possesses no property giving it any superiority over other preparations of opium.

We feel obliged for these communications, as we have no doubt the profession will, for they prove what we have long believed to be the fact in regard to this preparation; in experimenting with it, where we expected less cerebral disturbance —or less nausea, or less constipation,—from a given anodyne effect, than would follow the use of the ordinary preparations of opium, all of which are claimed for it, we have uniformly been disappointed.

It might be an interesting inquiry, how members of the regular profession, in good standing, can justify themselves in recommending and prescribing this—a secret remedy, as many have done, which was foisted into notice in as objectionable a manner as many of the quack nostrums which load the shelves of the druggists throughout the country—while theoretically, they are so exceedingly sensitive about the least violation of the "Code." Medical men should desert their standard, "*Nec prece nec pretio.*"

ILLINOIS STATE MEDICAL SOCIETY.

The State Medical Society convened in its 12th annual session in the Common Council chamber in this city, May 3d, at 10 o'clock, A. M. In the absence of the President, Dr. A. H.

Luce, of Bloomington, 1st Vice President, called the meeting to order. Dr. N. S. Davis, Secretary.

The following members were present during the meeting:

Cook Co.—Drs. G. C. Paoli, R. C. Hamill, M. O. Heydock, E. L. Holmes, S. Wickersham, E. Andrews, Ira Hatch, DeLaskie Miller, Thos. Bevan, C. G. Smith, Ephraim Ingals, N. S. Davis, J. Adams Allen, W. H. Byford, R. N. Isham, J. H. Hollister, J. Bartlett, A. Fisher, J. S. Jewell, S. C. Blake, A. Groesbeck, H. M. Lyman, H. Wing.

Edgar Co.—Dr. J. M. Steele.

Kane Co.—Dr. D. W. Young.

LaSalle Co.—Dr. E. P. Cook.

McLean Co.—Drs. H. Noble, A. H. Luce.

Morgan Co.—Drs. D. Prince, R. E. McVey.

Iroquois Co.—Dr. L. F. Hewins.

Members by Invitation.—Drs. Mascom, of Iowa; S. H. Holden, U. S. A. The Treasurer's Report showed balance due printer for publishing Transactions for 1863, $53.

The following committee was appointed to nominate officers for the ensuing year, viz., Drs. R. C. Hamill, R. E. McVey: H. Noble, E. P. Cook, J. M. Steele, G. S. Whitmire, L. T. Harris, D. W. Young.

The annual assessment upon the members was fixed at $3.

On motion of Dr. Miller, the meeting adjourned to 2, P. M.

AFTERNOON SESSION.

The meeting was called to order by Dr. Luce, Vice President. The committee on nominations reported the following names for officers for the ensuing year:

President—A. H. Luce, M. D., of Bloomington.

1st Vice President—J. H. Steele, M. D., of Grandview.

2d Vice President—Thos. Bevan, M. D., of Chicago.

Treasurer—J. H. Hollister, M. D., of Chicago.

COMMITTEES: *Practical Medicine*—Drs. J. Adams Allen, Chairman, C. Goodbrake, H. Noble.

Drugs and Medicines—Drs. J. Bartlett, F. R. Payne, T. D. Fitch.

Obstetrics—Drs. W. H. Byford, L. Clark, S. F. Trowbridge.

Snrgery—Drs. A. L. McArthur, D.W. Young, L. F. Hewins.

The committee also recommended Bloomington as the place for holding the next meeting of the Society. On motion, the report was adopted, and the officers named declared duly elected. A letter was read from Dr. A. McFarland, President, regretting his unavoidable absence.

Dr. R. E. McVey read an interesting paper on Cerebro-Spinal Meningitis. Dr. J. Adams Allen read a portion of an able and interesting paper on the same subject. Dr. J. S. Whitmire made a verbal report of three cases occurring in his practice.

The Chairman of the committee on Surgery read an abstract of their annual report. Referred to the Publishing committee.

Dr. E. L. Holmes read an elaborate report on the Diseases of the Eye, which was accepted, and referred to the Publishing committee. On motion, the Society adjourned to 9½ o'clk., Wednesday morning.

SECOND DAY—WEDNESDAY, MAY 4th.

The Society met pursuant to adjournment, the President in the chair. Minutes of the preceding day read and approved.

Drs. N, F. Burdick and Joseph Tefft, of Elgin, were elected members of the Society.

Dr. Miller, of Chicago, Chairman of the committee on Obstetrics, presented a report, which was accepted, and referred to the Publishing committee.

Dr. Prince, of Jacksonville, presented a report on Orthopœdic Surgery, which was accepted, and referred to Publishing committee. The meeting adjourned to 2 o'clock, P. M.

AFTERNOON SESSION.

Dr. J. A. Allen read the remaining portion of his paper on Cerebro-Spinal Meningitis, which was received and referred to the Publishing committee.

The Society then adjourned to 9½ o'clock, Thursday morning, and devoted the remaining portion of the day to visiting Rush Medical College, and the Marine Hospital.

THIRD DAY—THURSDAY, MAY 5th.

Society called to order by Dr. A. H. Luce, President. Minutes of previous meeting read and approved.

The names of James H. O'Kelley, William R. Fox, and Matthew J. Johnson were read as members.

The committee on Nominations submitted the following as

Committee of Arrangements—Drs. O. F. Worrell, S. W. Noble, J. D. Rogers.

Assistant Secretary—Dr. R. C. Parke.

Special Committee on Ophthalmy—Drs. E. L. Holmes, R. E. McVey, J. S. Whitmire.

Special Committee on Orthopædic Surgery—Dr. D. Prince.

Special Committee on Spotted Fever—Dr. J. S. Jewell.

The report was adopted.

Drs. Bartlett, McFarland, and Wing, were appointed a committee to consider in what respects, the pecuniary interests of the Medical Profession suffer from unfavorable or deficient legislation; also to petition the Legislature in behalf of this Society, for such legislation as they may deem necessary and proper.

Appropriate resolutions on the death of Dr. Shubal York, of Paris, Edgar county, were adopted.

Dr. Young, of Aurora, offered the following, which was adopted:

Resolved, That the present pay and rank of Surgeons and Assistant Surgeons in the army is inadequate to compensate them for the services required of and performed by them, and

Resolved, That the members of this Association ought to make every possible exertion, through the National Medical Association, and our Senators and Representatives in Congress, to have our Medical brethren in the field receive at least a reasonable compensation for their services and sacrifices, while they are braving the dangers of camps, and caring for the soldiers of our country.

Dr. Wing, of Chicago, offered the following, which was adopted:

Resolved, That the profession is the proper judge of the qualifications of its members.

Resolved, That the interests of the profession will be promoted by having new members admitted on the judgment of the profession itself, and that, therefore,

Resolved, That the committee appointed under resolution to memorialize the State Legislature be instructed also to ask that the Society be authorized by law to grant certificates of qualification, on proper examination, to under graduates.

Dr. Davis made the annual report of the committee on Practical Medicine, which was referred to the Publishing committee.

Drs. G. B. Lester, and F. A. Emmons were elected members.

A vote of thanks to the Officers of the Society, and to the Common Council of the city of Chicago, was then adopted.

The following named gentlemen were selected as delegates to the ensuing meeting of the American Medical Association, viz., Drs. N. Wright, D. Prince, R. E. McVey, H. Noble, N. S. Davis, D. W. Young, J. M. Steele, J. Woodworth, J. Bartlett, J. S. Jewell, Lucius Clark, R. C. Hamill, N. Bottom, A. L. McArthur, E. P. Cook, T. D. Fitch, S. W. Noble, C. Goodbrake.

The Society then adjourned *sine die*.

BOOK NOTICES AND REVIEWS.

Transactions of the American Medical Association. Vol. 14, 1863.—The volume before us is about one-half the size of those that have preserved the transactions of former meetings of the Association. It contains the well-conceived and happily-written address of the acting President, Dr. Wilson Jewell, devoted to the consideration of the important question of public hygiene. In the report on Medical Education we are told that "the advancement in Medical Science and the increased value of its practical results are no longer debatable

problems. To the sublime art of Medicine, as at present understood and practiced, humanity owes much of the physical welfare it now enjoys; as well as the diminished severity of disease and its control by intelligent and judicious treatment." In support of this it quotes as follows from Macaulay: "Every bricklayer who falls from a scaffold, every sweeper of a crossing who is run over by a carriage, now may have his wounds dressed and his limbs set with a skill, such as one hundred and sixty years ago, all the wealth of a great lord, like Ormond, or a merchant prince, like Clayton, could not have purchased. Some frightful diseases have been exterminated by science, and some have been banished by police. The term of human life has been lengthened over the whole kingdom, and especially in the towns. The year 1685 was not accounted sickly, yet in the year 1685 more than one in three of the inhabitants of the capital died. At present only one inhabitant of the capital in forty dies annually. The difference in salubrity between the London of the 19th century and the London of the 17th century is very far greater than the difference between London in an ordinary season and London in the cholera."

Yet the report goes on to say that "the profession nowhere has answered the full expectation of its early promise. It does not hold the proud position, especially in this country, to which, as the guardian of truth, it is really entitled." This deplorable condition of affairs is attributed, in the report, to two causes. First, to the "private practitioner, who enters the pupil upon the office register without inquiring of, or caring for his educational fitness for a calling which demands the highest order of intellect, and the most various study and acquirement. He is often destitute of the moral independence or conscience, or both, to reject an applicant he has reason to regard as unfit for the pursuit he has espoused." Second, "the professors of colleges, who graduate, annually, large classes of young men in the cities, who, it is not too much to affirm, are, for the most part, poorly furnished for the responsible duties awaiting them in the future. Each roll of parchment indorses

its possessor as *vir ornatissimus*, and he goes forth an accredited agent—for life or death, endowed with all the paraphernalia of a Doctor of Medicine, but destitute of the brains." One would think this committee had forgotten that the multitude of worthy medical men who have crowned the profession with honor in times past, or who bless the present generation by their intelligent and humane labors, have found their way into the profession through the office instruction of these same "private practitioners," who are so severely censured, and have been publicly taught by "professors in colleges," who we are told, "annually graduate large classes of young men, destitute of brains." However, we may expect no more of this in future, for the committee have suggested the remedy: "Every physician who shall admit a young man into his office for instruction, without a certificate of suitable preliminary education," is to do so at the peril of being deemed "unprofessional, and liable of censure by, or expulsion from, any State or County Society to which he may belong." The entire system of college instruction is to be reformed. The number of professors is to be increased, and their appointment is to come from a Board of Regents, "a certain portion of whom should be medical men," the faculty of the college having no precedence in the nomination of candidates, or any influence, other than outsiders, in their selection. The custom of choosing the professors without regard to the wishes of the Faculty, and paying them from the public treasury, adopted in Europe, to insure as far as may be, a servile dependence of these institutions on the Government, from which they receive their support, is spoken of in terms that imply approbation.

There are to be not less than three courses of lectures of six months each, "and beyond this, a corps of teachers should be organized in connection with the Faculty, to direct the studies of pupils during the recess of lectures." As every one knows the impossibility of keeping a class of medical students together after the close of the regular term of instruction, we are

left to suppose that the duties of this "organization" are to be of an itinerary nature. The system of medical instruction pursued in Europe, appears to be the beau ideal of the committee, and we are informed that in "Edinburgh five years is the term of study, six months of each year, being passed in the University. In Paris, the number of professors is twenty-eight, besides assistant and adjunct professors, the course of instruction being embraced in eighteen courses of lectures, two a year. In Berlin, the number of professors and assistant professors is sixty-seven." Yet the example of Europe does not seem to us to offer much encouragement for the adoption of the views recommended in the report, for notwithstanding the great difficulty of obtaining a place in the profession there, we have no reason to suppose that the profession in Europe is more intelligent than it is in America, or that they treat disease more skillfully there than here.

The report pays a very high, and, as we think, merited compliment to Surgeon-General Hammond, to whom it says, "is due the credit of having inaugurated many wholesome reforms and stimulated a spirit of improvement unexcelled in its former history."

We think the report, taken as a whole, does the profession great injustice, and to speak of it as disparagingly as the report does, is as ungenerous as it is unjust, and such expression deliberately made and embodied in an authoritative announcement, which is adopted by a congress of medical men, might be expected to exert no small influence in robbing the profession of the "proud position to which it is entitled." The profession is not held, and does not deserve to be held, in light esteem in this country. It is as much honored and exerts as much and as beneficent an influence on the best interests of society as either of the kindred professions of Law, or Theology. A profession that has virtually exterminated small-pox, that has given us anæsthetics, that has enabled us to abridge the course, palliate the pain, greatly to curtail the mortality, or even by hygienic precautions, often entirely to escape from

the great majority of diseases, that has, in a notable degree, lessened the perils of labor, and perfected the treatment of injuries, and in short been more potent than any single cause, in "lengthening the term of human life," should not be spoken of by any intelligent man, but least of all, by any member of the medical profession, in terms of disrespect. None will deny that there are incompetent and bad men in the profession. To do so would be to claim for it an exemption to which no profession nor class of society can pretend. But while this is true, it is equally true that the medical profession was never before more worthy of honor, and has never been as much enlightened, or as useful in its labors as it is to-day.

It has fully kept pace with the march of society, and has lent to the general advancement of the best interests of the race, a power not surpassed by any equal number of men in any vocation. The prime necessity for the advancement of society is found in the increase of its numbers, and none have exerted so great an influence in this respect as the medical profession, which has so greatly reduced the annual mortality of the race. The profession will undoubtedly continue to improve, in common with other branches of society, as man, by increased knowledge and virtue, shall acquire thereby increased control over the forces of nature. But this increase will not be the result of violent and radical changes. There was never yet a successful revolution that was not the fruit of a slow growth, and those who expect to reach perfection through violence, are a class of visionary men, who waste their lives in a vain attempt at the realization of Utopian dreams.

The transactions also contain the report of the committee on Medical Literature—a paper on Diatheses, their Surgical relations and effects, by Prof. E. Andrews—one on the American Method of Treating Joint Diseases and Deformities, by Henry G. Davis, M. D.—the Report of a case of Diarrhœa Adiposa, by John H. Griscom, M. D.—Report on American Medical Necrology, by Dr. Christopher C. Cox—A paper on Laryngoscopal Therapy, or the Medication of the Larynx

under Sight, by Louis Elsberg, M. D.—An Essay on the Veratrum Viride, for which the Association awarded the annual prize, is by Prof. Samuel R. Percy. It is very ample, and we have neither time nor space to notice it at present.

The People's Dental Journal.—Edited by Drs. W. W. Allport, A. Hill, and J. Richardson. Quarterly. Price $1,00 a year. Chicago.

The initial number of the second volume of this candidate for popular favor comes to us improved in appearance. It contains much valuable information for the people in regard to "keeping the mouth in a healthy and working condition." It is commended by the leading Dental Journals; and we therefore recommend it to the attention of those having an interest in the subject, and who has not?

The Alleged Case of Poisoning by a Medical Man in Paris.—We mentioned a short time since that a homœopath, of Paris, had been taken into custody upon the charge of poisoning a lady, whose life was insured in his favor for £22,000. The case, according to French law, is being investigated by the Judge specially entrusted with the preliminary steps in the trial (juge d'instruction), the prisoner being all the while under close arrest. It would appear that these investigations have led to disclosures which throw additional suspicions upon the prisoner respecting the death of his mother-in-law, which took place two years ago. A great many witnesses have been examined, and careful analysis made by medical men, upon the directions of the judge. The investigation is not yet concluded. The prisoner does not seem much affected by his incarceration and the impending trial. Nay, his activity, vivacity, and petulence seem on the increase, as he is very busy with a lengthy correspondence and satirical writings, in which the persons principally engaged in the investigation are very roughly handled.

Berkshire Medical College.

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WM. WARREN GREENE, M. D., *Dean.*

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The Forty-second Annual Course of Lectures in this Institution will commence on Thursday, August 11th, 1864, and continue sixteen weeks.

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MEDICAL JOURNAL.

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ORIGINAL COMMUNICATIONS.

SOME ACCOUNT OF THE PREVAILING EPIDEMIC IN THE NORTH-WEST, VARIOUSLY DESIGNATED, BUT USUALLY POPULARLY DENOMINATED "SPOTTED FEVER."

A Paper Read Before the Illinois State Medical Society, May, 1864.

By J. ADAMS ALLEN, M. D., LL. D.,

Prof. Prin. and Prac. Med. and Clin. Med., Rush Med. College; Formerly Prof. etc., in the Indiana Med. College; Late Prof., etc., in the Med. Dep't of the University of Michigan; Ex-President of the State Med. Society of Michigan, etc.

The peculiar severity and remarkable prevalence of the epidemic popularly called Spotted Fever, and the great anxiety which manifestly prevails, to glean from every quarter information with regard to its nature, and especially its treatment, must be my apology for trenching upon the limited time of the Society by a brief paper upon the subject.

The writer claims as large an experience in this form of disease as has probably fallen to the lot of any living member of the profession, as it has happened to have been his fortune to pass through as wide a spread and devastating epidemic of it,

as any with which medical history acquaints us.* Limited in range, compared with Asiatic Cholera, Yellow Fever, or the Plague, nevertheless, by its intensity and mortality, in the particular districts which it attacks, the writer does not hesitate in saying that it is vastly more to be dreaded in any community than either of the forms of disease mentioned.

In the present paper the writer must premise the regret that fire, which is no respecter of persons, destroying his residence and its contents, in the spring of 1851, spared not his memoranda of this terrible epidemic which devastated many parts of the State of Michigan during the years 1847, 8, and 9. A record of numerous cases, in their onset, progress, and *post mortem*, was thus unfortunately destroyed. The impression left upon the writer's mind, deepened as it has been by frequent observations since that time, is too profound to depend upon any manuscript aid. Not less than five States of the North-West have recently been visited by this mortal disorder. A very little light is better than none in a dark place, and it is not hazarding too much to say that no man as yet so well understands the "Spotted Fever," as to be incommoded by the slightest additional information on the subject.

Of the Spotted Fever very little is found in the text-books, and our own observation is, that of the various monographs on the subject, but few, if any, reflect the personal experience of their writers.† Even the name is a subject of dispute—*stat nominis umbra.*

The diagnosis is comparatively clear to any one with even slight experience—unfortunately the reliable therapeutics puzzle and confound the most expert. Most remarkable as an epidemic, yet it often occurs sporadically, and in the latter case the diagnosis usually is—*congestion* of this, that, or the

*The number of cases personally observed by the writer, was not less than a thousand, and probably many more than that number.

† Several monographs have appeared on the subject, wherein the writers speak *boldly*, although they confess to have seen not more than a half dozen cases.

other organ, more frequently the brain. As though the term *congestion* explained anything!

In observing the phenomena presented, we may premise that they simulate the toxicological—we can scarcely resist the belief that they are caused by a specific *materies morbi*, which the popular opinion readily conjectures to be a contagious principle, yet by careful observation we become convinced that this *materies morbi* must have been generated within the system by the agency of external causes. The causes without—the poison generated within. According to the writer's observation, it is more likely to occur in winters with a variable temperature—where a few days of intense cold are rapidly followed by days of thaw, mud, and rain. Neither uniformly cold nor warm weather are so likely to engender it. But other influences unquestionably co-operate. It does not seem always confined to a particular season. We have seen cases in the wet basements of Chicago, and they have, according to the best authority, occurred in military camps in damp localities, irrespective of, or connected with "malarious" influences. Here and there, wherever the "grand army" of the Union has been dispersed, it has manifested itself, oftentimes vaguely denominated Cerebro-Spinal Meningitis, or "Congestive Fever," according as the reporter was, or was not, familiar with the peculiarities of the disease.

In its incursion it does not appear to select those debilitated by previous disease, in preference to the robust. It selects no particular age or sex, neither are any exempt. Nor does it seem to be influenced materially by localities—those upon the highlands, and those upon the lowlands—the rich and the poor are quite impartially seized. And yet there is a feature of causation which is generally to be noticed as common—the variable hygrometric and thermometric condition of the atmosphere. This is a point worthy of consideration in its physiological relations, and gives a glimpse of the real nature of the disease.

THE ATTACK.—The modes of attack are various, and yet all coincide in reprosenting a potent influence upon the nervous system. More commonly this is manifested by distinct *rigor* gradually passing to general coldness, absence of pulse in the extremities, and coma, very like that of pernicious remittent, and this, it may be, without marked local symptoms. At other times *pain* is the prominent symptom—pain more frequently in the occipital or nuchal region, but very often in other parts of the head, in the shoulders, trunk, hips, or extremities. This pain is usually sharply circumscribed, but this is not invariably the case. It becomes more and more intense, until the patient grows delirious, apparently from its severity, and then ultimates in coma, after which, the disease takes the same course as when ushered in by a chill. Or it may speedily be replaced by the rigor. The *suddenness of the attack, and rapid progress to grave symptoms* are very characteristic. The delirium which ensues upon the pain, or which supervenes upon the coma, is of the most violent character, with incessant jactitation and often vociferous and incoherent cries.

THE ERUPTION.—Sometimes at the very outset, but usually not until the lapse of several hours—from three to twenty-four—there occurs a peculiar discoloration or eruption upon the surface, but this is exceedingly variable in its form. Sometimes it consists in simple petechial points, and again of dark discolorations of large surfaces, like ecchymosis, or rather the subcutaneous extravasation of purpura. More frequently there is no elevation of the cutis, but occasionally there are elevations of the epidermis like bullæ, with thin, dark, sanious contents. Sometimes it approximates the mulberry rash of typhus, and again it is said by some of my correspondents to look like the eruption of measles. I have never seen it take the latter appearance. The form of the eruption, although from its frequency is derived the popular designation of the disease, is not diagnostic. Mainly the evidences presented by it are those of a diffluent disintegrated state of the blood. Yet I have fancied the prognosis was modified, as in many

eruptive diseases, by the brightness or lividity of the eruption. *The eruption or discoloration is not invariably present.*

Innervation.—Among the most remarkable symptoms may be mentioned persistent tonic contraction of the muscles of the back of the neck, sometimes deepening into opisthotones; convulsions, paralysis of the extremities, particularly of the arms, and also of the optic and auditory nerves—the auditory oftenest,—remarkable soreness of the surface and joints to touch or motion.

There may be intolerance of light and sound, but oftener the special nerves involved are paralyzed. While there is the most excruciating hyper-æsthesia of the general surface, the fingers may be placed on the cornea with no flinching by the patient. Rarely the muscles of articulation and deglutition are paralyzed. Hemiplegia is not infrequent, or the paralysis may be confined to a single extremity. Strabismus, unequal size of the pupils, twitching of the facial muscles, etc., etc., are incidental symptoms.

The Pulse, at the outset, is small, thready, tremulous, irregular, soft, and speedily lost at the wrist. On the occurrence of reaction, or remission, it increases in fullness and force. About always during the primary stage, it is slow, but during reaction it runs up to 120 or 150.

The Skin is, in most cases, dry as well as cold, but in perhaps twenty-five per cent. it is moist. In all instances, it is variable at different hours of the day.

The Tongue is more or less enlarged and flabby, with indentations of the teeth upon its edges. It is pale and moist, with a coating of a pale ash or white color, passing to yellow or brown, but it does not present distinctive symptoms.

Nausea and Vomiting are occasional, but not constant symptoms; the matters thrown up being the normal contents of the stomach, or, in bad cases, decomposed blood, bile, mucus, etc.

The Bowels are variable. Some cases are natural, in others, there is obstinate constipation, and in others still, severe

diarrhœa, with discharges of grumous and offensive matters.

The Respiration is ordinarily laborious and irregular, sighing and perhaps stertorous, or hissing through the clenched teeth; more frequent than normal while consciousness continues, but becoming slower with advancing coma.

The Urine is generally scanty, smoky, albuminous, depositing a plentiful sediment, intermixed with ropy mucus and disorganized blood corpuscles. In some instances I have known it abundant and of low specific gravity.

The Second Stage.—The first stage may terminate in death in a few hours, or, after an interval of from six to twenty-four hours, there may occur a marked remission of the symptoms —a very deceptive remission—leading both the physician and patient to believe the difficulty pretty much over. Supervening upon the remission rapidly, or it may be upon a gradual awakening from the comatose state, there will be intense febrile excitement, great heat of the surface, rapidity and strong tension of the pulse, arterial throbbings, flushed face, turgidity of the conjunctiva, with extreme thirst, etc. This is liable to be attended with the highest grade of delirium, and frantic muscular jactitation, requiring several attendants, perhaps, to keep the patient in bed.

The delirium may, after a while, merge again in coma, apparently from utter exhaustion, or it may gradually moderate in violence and pass into the low muttering character, with subsultus, etc., the patient supine, with the extremities fixed, and painful to touch or motion; or in some cases turned rather to the prone position, with, in either case, the posterior muscles of the neck fixed rigidly, drawing the head strongly backward. Occasionally it is drawn laterally backwards, but is always in a state of rigid immobility.

In this stage the bowels are inactive, and the urine either scanty or wholly retained. The skin is hot, but not infrequently reeking with an offensive perspiration. Irregular or partial sweats are common. Convulsions, paralysis, pain or other evidences of central nervous disorder are largely aggravated.

The patient may die in this stage, or

Lastly, may pass on with irregular febrile phenomena, into the low, lingering typhoid stage, stretching over even forty or sixty days, before the establishment of a tedious convalescence. The low fever which so often supervenes upon severe attacks of the Asiatic Cholera much resembles it.

From the outset there will be presented intermingled symptoms, according to the involvement of particular organs in secondary lesion. The lungs are especially liable to severe or even fatal disorder. So much so indeed as, by the gravity of its manifestations almost entirely to mask the original disease. Dr. Condie, in a note to the American edition of Watson's Practice, includes a description of this form under the head of Typhoid Pneumonia, but it is unnecessary to say that the disease described is but the one now under notice, with secondary pulmonary complication.

Ulceration of the throat, the writer has observed as a complication in several cases—the destruction of tissue proceeding to an alarming extent. Erysipelas is the most frequent and dangerous of complications. It is easily kindled upon the slightest abrasion of the surface, and often, without such a nidus, attacks the face and neck, extending to the scalp, or more rarely seizing the extremities. This erysipelatous affection is apt to be exceedingly destructive to the part attacked, giving rise to foul sloughing sores, rapidly wearing out the patient by exhaustion. Some of our friends who have observed this frequent concurrence of erysipelas, have been so struck by it as to be led to believe the disease essentially an erysipelatous inflammation of the Cerebro-Spinal tissues, as also of those organs secondarily involved.

The abdominal viscera sometimes experience the full force of the morbific influence, but in greater part are comparatively little disturbed. Epistaxis, hæmatorrhœa, hæmatemesis, and hæmaturia are occasionally present to a dangerous extent.

Sequela.—Among the sequela we note deafness, blindness, partial or complete paralysis of motion, tuberculosis, albumin-

uria. Albumen is about invariably present in the urine of the tardily convalescent, or ultimately fatal cases of long continuance. Marasmus in both children and adults, and phthisis in the latter, are especially common. The constitution seems broken down, and perhaps years elapse before the surviving patient recovers his original vigor.

Post Mortem.*—With regard to *post mortem* appearances, there has been much apparent discrepancy of description. The explanation of this discrepancy is found easily in the fact that death may result in any stage of the disease. It thus becomes quite difficult, at times, to discriminate the incidental complication from the primary original affection.

If the patient die in the first stage, within a few hours from the attack, there may be very few signs of local change. The blood will be found settling to dependent portions, and with a loose, gory, diffluent clot. There will be found stasis of blood in the capillaries of the Cerebro-Spinal meninges, particularly of the pia-mater and dura-mater, rarely of the arachnoid. The superficial vessels of the convolutions will be distended, and those upon the walls of the venticles likewise full, presenting here and there spots like ecchymosis, though more florid in hue. Sections of the cerebral substance will show a similar condition of the blood vessels, as manifested by large red points on cutting across them. The medulla oblongata, spinal meninges, and cord, at the upper part, will exhibit similar appearances. The stasis of semi-dissolved blood is so considerable that both the gray and white tissues gain a pinkish tinge.

More or less circumscribed softening is found, usually involving the cortical substance of the cerebrum, the inferior surface of the cerebellum, and the floor of the lateral ventricle. In fine, a lessening of the firmness and density of the whole mass is evident on careful inspection. Effusion of discolored serum into the cavities is present, now and then, to a large amount.

* The post mortem appearances here described, are those fully confirmed by the writer's own dissections.

If the case has run on to high reaction, all the results of inflammation may be present. In this case the arachnoid is apt to be thickened, and with loss of its transparency. In the exuded matters are found pus and lymph corpuscles, or the exuded lymph forms a quasi membrane, loose, creamy, and readily broken down, upon the surface, or along the course, of the large vessels. The greatest quantity is at the base of the brain, and always at the optic commissure. It is also stated to be found on the corpora quadrigemina, the medulla oblongata, and around the third pair of nerves, where they penetrate the arachnoid membrane. Wherever the exudation takes place it is likely to be stained by the dissolved hæmatin.

In the spinal region, the morbid changes affect mainly the meninges, the substance showing little modification of structure—the most observable being softening. The exudation, discoloration, and softening are most noticeable about the roots of the cervical nerves. The thoracic and abdominal lesions present nothing distinctive. Where the lungs become involved, there are the ordinary evidences of stasis of blood and effusion, or where the later stage is reached, the usual results of inflammation. The same remark may be made of the intestinal tube.

Here rests the case, so far as my own examinations have extended, and so far as those made by others, which have fallen under my notice, have been concerned. To my own mind the morbid anatomy thus far developed, is altogether unsatisfactory. The advances of modern Physiology indicate a still further exploration of the cadaver, which I confess not to have made, and am at this time only consoled in not having made, by the concurrent failure of other inquirers on this subject, and by the still more cogent reflection that probably if the examination had been made it would have proved scarcely more than negative.* But on this point hereafter.

*At the meeting of the State Society, before which this paper was read, it was stated that certain recent dissections showed commencing fatty degeneration of the kidneys. In so far this confirms the writer's present views.

It is proper to remark, that whilst in about every case there is on *post mortem* some visual evidence of local disease of the cerebro-spinal region, nevertheless, in very many, this evidence is very slight, and in some it is inappreciable. The disease is capable of killing the patient speedily or slowly, and yet leaving behind no trace of its footsteps. Here, as elsewhere, the facts teach that the immediate molecular changes, upon which life and death depend, are intrinsically beyond the sphere of our aided or unaided observation. We necessarily infer their existence, precisely as we infer the reactions of a chemical mixture, by observation of results, and of things which we can see, and handle, and weigh.

Necræmial Cases.—In common with many other potent influences which suddenly strike down the powers of life—the cause, or causes of this terrible disease may produce, at once, necræmial symptoms, so profound that particular manifestation of the special "proximate cause" will not take place. The diagnosis here is really not of much, if of any, importance. Malignant typhus, small pox, scarlatina, rubeola, diphtheria, Asiatic cholera, erysipelas, pernicious remittent, uræmia, etc., are severally capable of producing the same condition. In this case, an overwhelming cause acts especially upon the cerebro-spinal centre, and secondarily upon other organs. The blood from the beginning is poisoned, and scarce living, and death may ensue from this poisoning, or later, from the local changes in the brain and cord, or in some instances, from involvement of other vital organs. Probably all observable lesions are truly secondary.

Diagnosis.—The only forms of disease with which this is liable to be confounded are, pernicious remittent, ("congestive") fever and typhus. Nevertheless, as there is no limit to human absurdity, one medical journalist claims that all these noted cases are but malignant scarlatina! Such absurdity of speculation exhibits itself in too clear a light to need effort at controversy. Yet it may be observed that in the progress of

pernicious remittent and malignant typhus, cerebro-spinal changes often occur, which render the diagnosis impossible; and this may not be deemed unfortunate, because at the same time it is unnecessary. Since enlightened medical men have ceased to regard diseases as entities, and no longer rely upon routine treatment, the diagnosis of names has yielded place to the search for causes and conditions, and treatment has been placed upon a broader and more certain basis.

Those who carefully notice the peculiar disturbances of the nervous system and muscular apparatus in this affection, can not fail to see that they are exceedingly rare in the so-called congestive fever of malarious districts. There is no periodicity about it. It can not be merely a severer form of that fever for it occurs in districts indiscriminately, where that fever is known and where it is not. It occurs at a season of the year, mainly, when notoriously, pernicious remittent loses its virulence, and indeed, is scarcely ever present, save in cases which have been especially liable to attacks of periodical disease, and whose constitutions have been broken down by previous illness.

Briefly, the paralysis of special sensation and voluntary motion; the hypersesthesia of the surface and joints, or more remarkably, of circumscribed localities; the opisthotonos and convulsions; the petechiæ and vibices; the absence of periodicity, notwithstanding marked remissions; the locality and times of occurrence; the sequela; these and many other particulars, to be seen by the seeing eye, distinguish the disease from "Congestive Fever," with no difficulty or uncertainty.

The influence of quinia is wonderfully diagnostic. In pernicious remittent it is prompt, powerful, and certain—it is *the* remedy, with all others ignored. In the disease under review, it is scarcely noticeable in effect, and wholly unreliable, nay, comparatively worthless as a remedy. The "*Congestive Fever*," bows beneath its potent influence at once—the "*Spotted Fever*" scorns its impression.

Practically, the *physiognomy* of the disease is as diverse as the lineaments of strangers.

Nearly the same features separate it from "maculated

typhus." It is not a severer form of typhus disease, because it is rarely developed under those known circumstances which develop the latter. The nervous manifestations at the outset are wholly diverse; the mode of attack and progress of the cases are dissimilar, save that in some cases a low fever follows the secondary lesions; but well marked, and indeed some of the severest, cases are arrested, and convalescence occurs, without any such secondary fever.

The eruption, or rather extravasation of dissolved blood beneath the skin, is wholly unlike the maculæ of typhus, or the roseolar spots of typhoid. Such extravasations do not constitute the peculiar eruption of typh disease. Typh fevers are the creation of *ochlesis*, of bad ventilation, filth, and improper food. This clearly depends on meteorological influences, entirely apart from the accumulation of human beings in crowded places; independent of decomposing organic matter; independent of confined air. It attacks equally all ages, from the infant to the veteran—the out-door laborer and the lady in the parlor.

Presenting some symptoms in common with typh diseases, its history and physiognomy are as diverse from them as "bilious remittent" from "yellow fever."

Its diagnosis only becomes difficult from them in that necræmial condition, before alluded to, when these and a vast number of other malignant diseases are merged in common manifestations, by the overwhelming nature of the causes producing them.

Prognosis.—The proportionate mortality in the early periods of this, as of other pestilential epidemics is something frightful to contemplate; but there always remains this well-established fact that under about any respectable, or even so-called active, treatment, the fatality steadily diminishes with time, and the later cases are quite controllable. Its primary mortality in proportion to the number seized, is unsurpassed even by Asiatic cholera.

Therapeutics.—It would be a happy circumstance if the

treatment were as satisfactorily determined as even the character of the disease. Unhappily this is not the case—but much can be done, and many lives thereby saved, which neglected would have been lost. This is a truth which charlatans and pretenders are ready to take advantage of, and all ears are speedily stunned by the praises of particular remedies and methods which they go around braying about. "Specifics" for it are as plentiful in every city, village, and hamlet as applicants for offices after a Presidential election—but, alas, they fail miserably in the trial.

Under the writer's own observation has come treatment which ought to make all classes of created things—from angels to jackasses—weep. We have seen men try to bring on a crisis—the *death-crisis*—which we have elsewhere exposed, by bloodletting. Others attempt the same thing by emetics and mercurial purges. Steaming is perhaps the most popular plan of producing exhaustion of the feeble remaining powers of life. We have seen long trains of wagons returning through *Michigan mud* from the hemlock woods, a score or more of miles away, laden with the precious branches, (Birnam's wood coming to Dunsinane,) greeted as Oriental pilgrims coming from Mecca.

I have known fifty grains of morphia given within a dozen hours to a boy of fifteen, to relieve him from the terrible pain and suffering, with no avail, save that death followed.

Incalculable quantities of brandy and quinine, of capsicum and carbonate of ammonia, have been poured into the stomachs of the comatose; and there is no measurement of the amount of turpentine and other irritants, which have been thrown up, *per rectum*. The surface has been parboiled, roasted, canterized. What have we not seen done?

There is no limit to human credulity—there is no bound to human assumption. The most trivial remedies have been ushered into notice, and temporary repute, under the loosest of professional hypotheses—fortunate only in that they have replaced destructive methods.

Flimsy chemical analogies, mixed with apocryphal ferments, have floated sundry inert substances into use, which luckily convert the sin of commission into the less odious sin of omission. Satisfactory treatment remains to be discovered. There are no specifics—there are no antidotes. Yet experience points to some things which seem to have done something—perhaps, *post hoc ergo propter hoc*, after all.

And, *first*, we rank external stimulants—rubefacients and artificial heat. Whatever will powerfully stimulate the surface, especially along the spine and the extremities. This not from any vague idea of internal "pressure," or "congestion," to be overcome by "determining to the surface," but for promoting tissue changes in this most accessible of the excretory organs, and thus awakening energy of the circulation, and immediately excretion of effete matters, and renewal of blood. The rubefacient becomes thus a general stimulant. With capsicum and mustard, ammonia and terebinthinates, pungent oils and friction, the means are abundant enough, and the practitioner can take his choice. But, let it be observed, to be useful the action of the surface must be awakened, and not merely irritated. Persistency, and yet caution not to destroy the tissue, must be the cardinal points in view. Direct heat from its ultimate sedative impression, is a more questionable remedy. The hot water or vapor bath speedily exhausts—still, when the surface is dry and rigid, these may be employed for a short time only. The alcoholic vapor bath is better.

A potent stimulant is the application of ice for a few moments and then the alternation of hot epithems—this alternation to be frequently repeated. The intense local pain, so often present in the primary stage, may occasionally be controlled by full doses of morphia internally, but usually the amount required is so excessive as to prove dangerous of itself. Under these circumstances the hypodermic injection will be found of greater advantage. But from the puncture there is always danger of erysipelas. The same remark applies to

vesicants—primarily of excellent service, secondarily there is danger of sloughing sores. The slightest abrasion of the surface is to be looked upon with fear.

Internally stimulants and restoratives, boldly, but with due regard to their ultimate effect. Thus the alcoholic stimulant of whatever sort, when acting at all, is quite disposed to produce the sedative or anæsthetic effect, checking tissue metamorphosis, hence the disappointment so often experienced on its administration during the cold stage, or in necræmial cases. If given, it is better combined with arterial stimulants—capsicum, piperin, monarda, etc. Etherial preparations, ammonia, etc., answers well in some cases.

In the writer's experience the *Tincture of Cantharides* in full, and what to some would seem inordinate, doses has been found the most valuable of internal stimulants. Of this, (a *proved* preparation,) from twenty to forty drops may be given every hour until reaction ensues, or strangury supervenes. The occurrence of strangury, so far from being dreaded, is to be hailed as an omen of the most favorable import. It may be but a coincidence, but it is fortunately an invariable one, that the patient in whom this symptom occurs, from this or any other cause, gets well. This interesting fact, observed more than fifty years ago in the history of this same disease, seems to us to let in a glimpse of light upon the therapeutics. It is not the strangury which cures, but the awakening of the nervous system and of the excretory energy, which this symptom incidentally manifests. The favorable result may be secured without the induction of strangury.

Where there is any appearance of erysipelas, or where there are any evidences of dissolution of the blood, as shown by the deep, livid shade of the spots, or by passive hæmorrhages, the *Muriated Tincture of Iron* should be simultaneously administered. Coinciding with the general effect of the Cantharides, it seems to especially prevent further destruction of the blood and to facilitate its repair. Besides it lessens the liability to injury of the kidneys, and moderates strangury. Ten, twenty,

or more, drops of the Tincture of Iron may be given with each dose of the Cantharides, and the mixture well diluted in some convenient vehicle.

Other stimulating diuretics which we have tried have thus far proved less useful in our experience, but we favor further experiment on the point.

When pain is dangerously intense, or convulsions occur, chloroform or ether may be carefully administered by inhalation; and we should very much like to try here, as we have not yet had an opportunity, the Protoxide of Nitrogen, or "laughing gas." Theoretically, and by analogy of its use in other cases, we are inclined to believe it would be found an invaluable remedy. Its energetic stimulating power would probably favor speedy reaction.

We have not noticed any especial advantage from quinia in the first stage, although we have given it in doses varying from a couple of grains to half a dram every hour. The stimulating effect of the small dose is inappreciable; the sedative and diaphoretic effect of the large dose is objectionable. But when the deceptive remission occurs, we have fancied some benefit was gained by several full doses, at intervals of one or two hours—the sedative effect seemed to lessen the severity of the subsequent exacerbation, although we have found that a hundred grains thus given, would not prevent its access.

Please observe, that while the writer thus ignores quinia as a curative agent of cardinal value, as some believe it, in pure cases of Spotted Fever, he is ready to admit the great probability of its superior efficacy in the management of cases modified by the so-called malarious influences. The same remark may be made with regard to the arsenical preparations and other "anti-periodics."

On the occurrence of the remission, or the conclusion of the first period, something appears to be gained by relieving the bowels with a moderately stimulating cathartic, particularly when the cold stage has left behind it decided engorgement of the portal system. By this means the ensuing exacerbation is

ameliorated, and the tendency to pass afterwards into a low form of fever is sensibly lessened. We usually, for this purpose, combine calomel with gamboge, rhubarb, and soap, which operates freely but not violently in six or eight hours. Beyond this or some milder cathartic, we have rarely found it useful to employ purgation. The patient can not be cured by attempts to turn him inside out with either emetics or cathartics.

If during the stage of excitement which now follows, the urine becomes tolerably free and charged with its solid constituents, the patient may be reckoned safe, but if it is suppressed the case is one of extreme danger.

The practitioner is apt to be deceived by the apparent excitement, and hence to resort to excessive anti-phlogistic measures, but this is a dangerous error. Collapse impends, almost momentarily, and it is indispensable to be on guard. Saline diuretics, very moderate doses of the usual sedatives, and perhaps anodynes may be used; but bleeding, vomiting, and purging are out of the question. Ablutions with cold water, or the tepid bath, or showering the head, we have found in this case even more useful than in the similar stage of remittent. *When in doubt*, our own experience teaches us to say, *stimulate* even here. At all events hold up the great powers of life by careful restoratives and abundant fluid nutriment. Destructive changes will thus be prevented; the liability to collapse lessened, and the tendency to tedious low fever with doubtful final result, abated.

But better do nothing than to do mischief. Discussion of the low fever and the various sequela occasionally met with, ensuing upon the attack, is not within our present purview. The treatment is comparatively clear and simple. Incidental local complications will modify each case, and the patience of even the most skilled practitioner will be severely taxed by the tedious prolongation. But the indications are so palpable and unmistakable that they need not command further notice in this place.

One or two remarks and this already too long extended paper will be brought to a close. The term Cerebro-Spinal Meningitis now generally accepted as designating "Spotted Fever" is objectionable, in that it conveys the idea that the disease is essentially an inflammation of the parts indicated, which is clearly not the fact.

The phenomena indicate the presence of a blood poison, prominently (but not invariably or exclusively,) affecting the cerebro-spinal meninges.

There is reason to believe that this blood-poison is generated within the body itself, by concurrence of external causes influencing especially the physiologically vicarious, yet collaborating organs, the skin and the kidneys.

There is reason to believe that elimination of that poison, and consequent cure, is to be sought among those agents which especially impress these great emunctories.

At all events, mere stimulants or antiphlogistics fail!

CLINICAL LECTURES ON DISEASES OF THE EYE.

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THE CORNEA.—CHRONIC INFLAMMATION.

Gentlemen:—Under the term, Chronic Keratitis, I shall include the following forms of disease: vascular corneitis, phlyctenular corneitis, inflammation of the substance of the cornea, corneitis punctata, and shall close with a few remarks upon the sequelæ of corneitis, ulcers and opacities of the cornea.

These divisions will embrace nearly every form of chronic corneal inflammation, which you will most often meet in practice. You must not infer, however, that each class in all cases

is characterized by well-marked, distinct symptoms. If you understand typical cases, you will readily comprehend such complicated cases as present many symptoms, common to several of the above-mentioned classes. I have termed these diseases chronic, since such is their usual character, although I should state that some of them occasionally terminate quite speedily in health. For the pathology of the different forms of Keratitis I must refer you to a former lecture.

1st. Vascular corneitis is usually a secondary disease, dependent upon long-continued irritation. This irritation may be produced by granulations upon the lids, rubbing over the cornea, by the presence of ulcers and phlyctænulæ of the cornea, by the action of foreign bodies, long retained under the lids, and by the constant exposure of the cornea to the air, as in ptosis and deficiencies of the lids from wounds, which prevent closure of the lids. One of the most favorable opportunities for studying the formation of vessels on the cornea is afforded by chronic conjunctivitis, especially when attended with granulations. At first the fine vessels are only observed, radiating over the limbus conjunctivæ. As the irritation continues, the inflammatory action invades the cells of the cornea, as shown by the presence of thin, nebulous patches upon the cornea. Accompanying this haziness the vessels are observed to advance beyond the limbus of the conjunctiva, upon the cornea. Ulcers of the cornea and phlyctænulæ very often render the surface of the cornea vascular; in these conditions, the vessels usually extend in small pencils from the periphery of the cornea to the points primarily diseased. Extreme vascularity of the cornea, with partially organized lymph, covering the cornea and somewhat resembling the granulations of a wound is termed pannus.

I shall say but little regarding the treatment of vascular corneitis. In a large proportion of cases, the vascularity disappears when the primary disease has been relieved.

2d. Phlyctænular corneitis is characterized by the presence of small inflamed elevated points, situated upon the cornea

or at the union of the cornea and sclerotic. At first they are minute greyish points, which soon enlarge and become red, with increased vascularity of the surrounding tissues. Neuralgic pains, photophobia, lachrymation are frequent symptoms, variable however in violence. In mild cases there are few phlyctænulæ, and the irritation is confined principally to the globe. But very often there is intense pain, and swelling of the lids, with photophobia, so intense, that great distress is produced by the smallest amount of light that can enter the eye, when the patient is in a darkened room with the eyes bandaged. To obtain a satisfactory examination of the cornea it is necessary to place the patient under the influence of chloroform. This disease, or different phases of it, is known also as pustular ophthalmia, herpes cornea, scrofulous ophthalmia, and is principally found among children who suffer from a scrofulous diathesis.

I can only call your attention to a few of the general principles in the therapeutics of this disease. In treating this affection it is of primary importance for you to remember that the local disease is usually but a manifestation of constitutional derangement. It will be your duty, therefore, to improve the general health by means of necessary hygienic regulations, and by the use of such remedies as will correct the diathesis, as cod liver oil, iron, iodine, and occasionally bichloride of mercury in minute doses. Not unfrequently, I have found quinine, as recommended by Mackenzie and others, of great benefit, even when the patient is aparently not suffering from malarial influence. It is of the utmost importance to prevent patients from bandaging the eyes, and from burying the face in pillows and cushions, which such patients almost invariably do, when there is much photophobia. This causes congestion and prevents recovery.

The use of stimulating astringents requires much care. Trial of these remedies should be made, increasing or diminishing their strength as the case is found to require. I usually apply the solution of nitrate of silver, if found necessary, as I

described in the treatment of acute conjunctivitis, commencing with the strength of ten grains to the ounce. A very useful remedy in many cases is the yellow oxide of mercury, united with the glycerole of starch. An account of this remedy can be found in the first volume of the *American Journal of Ophthalmology*. With the best of treatment the disease is very liable to continue for a long time, or, if relieved, to return on exposure to changes of temperature.

3d. Inflammations of the deeper portions of the cornea are not uncommon. The first symptoms are, a loss of lustre and transparency of the cornea, the cloudy appearance being modified by the color of the iris. The disease may affect the whole cornea, or be confined to a portion of it. In proportion to its severity there will be redness of the conjunctivæ, photophobia, pain, and inability to keep the eye open. The cornea, or the affected portions of it, may become so opaque as to conceal the iris and pupil. At any stage in its course the disease may assume an acute form and speedily result in abscess or ulcer, or the same result may occur by a slow process.

A particular form of this disease, often complicated with iritis, and accompanying a peculiar development of the teeth, their edges being notched, as symptoms of inherited syphilis, has been described by Mr. Hutchinson, in a monograph worthy your perusal.

The treatment must be conducted in accordance with the principles already explained in connection with the other forms of corneal disease. Attention to the general health and mild local stimulants cautiously used in the form of weak solutions of arg. nit., vin. opii, and powdered calomel blown into the eye, are the chief remedies. Where pain is a prominent symptom, morphia internally, and atropia locally, are demanded.

4th. Corneitis punctata, would perhaps scarcely merit mention as a distinct disease, were it not so regarded in most works on diseases of the eye. It is characterized by numbers of fine grey points upon the cornea. Upon a careful examination the

cornea is observed to be more or less covered with minute depressions as if made with the point of a needle. There is generally little pain or photophobia, but marked indistinctness of vision. The iris especially, and sometimes the choroid, retina and lens, are liable to suffer with the cornea. The disease almost invariably depends upon scrofulous or syphilitic diathesis, and is exceedingly obstinate. Constitutional treatment alone seems to be attended with benefit.

5th. Chronic ulcers of the cornea are chiefly observed in two forms, one accompanying granulated lids and vascular corneitis, and the other almost entirely without congestion of the eye. The first form often succeeds inflammation of the conjunctiva; the second, as a result of a minute point of corneal inflammation, precedes the vascular condition of the cornea and conjunctiva, which is simply a result, when it occurs, of the constant irritation produced by the presence of the ulcer. The first form will generally disappear if the primary disease is successfully treated. The second, like the other diseases above mentioned, require careful attention to the general health, and to a wise use of local stimulants. Although some of these ulcers are accompanied with scarcely any pain and congestion, they may resist all treatment for weeks. Preparations of lead should never be used locally in cases of ulcer of the cornea.

6th. I shall say but little regarding opacities of the cornea. You are aware that the greyish opaque portions of the cornea so often mentioned above, are manifestations of *existing* inflammation: The so-called opacities of the cornea are the result of past loss of the tissue; they are, in fact, scars, composed of newly-organized, but not transparent, tissue, thrown out to repair the loss. One of the chief diagnostic marks, distinguishing the two forms of opacity, is the aspect of their surfaces. In the first, the surface is usually dull and without lustre. In the second form the cornea has more or less recovered its brilliancy, though not its transparency. If the opacity is small and situated near the periphery of the cornea, vision

is little obstructed. But if it is in front of the pupil, the usefulness of the eye is, to a greater or less extent, impaired. These opacities, if deep, can seldom be removed. The most successful treatment in cases of superficial opacities is gentle stimulation, as obtained by weak solutions of arg. nit., zinc, copper, and by electricity. The removal of these opacities with the knife is rarely warrantable, except in cases where, from the improper use of plumbi acetas, the carbonate of lead has become incorporated in the substance of a superficial cicatrix. The operation for artificial pupil, in cases of central opacity, will be described hereafter. It is a fact worthy of notice, that patients with central nebulous opacities, can often see much better through a minute aperture in a thin plate of metal than with the naked eye, since the diffraction of light is in a measure overcome.

TÆNICIDE PROPERTIES OF PEPO,

With Report of a Case in which it was Successfully Used.

By E. INGALS, M. D.

Pepo—made officinal by the Pharmacopœia of 1860—has been known now for more than a century, to possess properties destructive to the tapeworm. The influence of the doctrine of signatures is said to have first suggested its use for this purpose. Inasmuch as there was observed to be a degree of resemblance between the pumpkin seed and the joints of which the body of the worm was made up, it was surmised that it would be the proper remedy to be used with a view of ridding the system of this troublesome parasite—and as fortune would have it, a doctrine that has its foundation only in ignorance and superstition, was in this instance the parent of truth. But though the pumpkin seed has been so long known as a remedy for tapeworm, yet it has never been extensively employed for this purpose, especially in this country. Its use

was introduced into the United States by Dr. J. A. Smith, of Boston, in 1850.

Since that time a considerable number of cases of its successful employment have been reported in our medical journals—such reports, coming mostly from physicians practicing in the Eastern portion of the Republic, and we have reason to think that the remedy has been used there more than at the West or South. The seeds contain a fixed oil, which may be obtained from them by expression, and to this is said to be due their medicinal virtue. Some cases of tapeworm have been successfully treated by the administration of this oil, a fluid ounce being given at one dose, to be followed in two hours by some active cathartic; but the oil is not known to possess any advantages over the seeds in substance.

The case in which we used this remedy occurred in a healthy boy, eleven years old, who, for two months before his parents brought him to me, had been voiding a number of joints of the worm daily, and his previous symptoms, as related to me, justify the conclusion that he had been afflicted with it more than a year, though no treatment had been resorted to, as they did not suspect the nature of the malady. The health of the child did not suffer, except that he was troubled somewhat at night by a cough of a spasmodic nature, and the parents noticed that this was always much worse when the child took milk for his supper, and likewise that prompt relief was sure to follow the taking of some bitter substance. I directed that ℥j of the pumpkin seeds should be freed from their shells, and then with ʒiv of sugar and ℥vj of water, to be made into an emulsion, and of this one-third was to be taken every hour, after fasting from supper until morning, and in one hour after the last dose ℥ss of castor oil. As this failed to act on the bowels, three hours after, ℥j more of the oil was given, which produced only a mild laxative effect, and this not until three hours after it was taken, bringing away only about thirty segments of the worm. This was on Sunday, and not wishing to keep the boy from his school, I post-

poned further treatment until the following Saturday, when I ordered the same amount of emulsion as before, directing that one-half of it be given in the morning, fasting, the remainder in half an hour; and one hour thereafter, ℥ xij of the liquor magnesia citratis. In a little more than two hours this occasioned active catharses; the first three dejections containing only disjointed segments of the worm, but the next brought the entire parasite, a tænia solium, twenty-two feet in length, but not dead.

I have reported this case, not as anything new, but hoping it may have some influence to induce others to test the virtues of this article. To obtain a medicine that shall be efficient for the cure of disease, at the same time that it is absolutely innocuous to the patient, is a desideratum greatly to be desired, but not always found. Of this remedy it is known that its use is neither unpleasant nor injurious, and it remains only to demonstrate its efficacy, and it is not unlikely that experience may prove it to be the best remedy for tapeworm, all things considered, that we possess.

The following are some of the advantages that the pepo may perhaps justly claim over other tænifuge remedies in common use, as the male fern, the bark of the pomegranate root, kousso, oil of turpentine, etc., 1st. To the patient it is entirely harmless and is not unpleasant to take. 2d. In this country it may always be easily obtained, and of a quality known to be good. 3d. To us it is indigenous, and other things being equal, such remedies should be preferred before those which are imported, especially in times like the present, when the whole nation should husband every resource, however trifling, for martial purposes.

Some recommend that the remedy be given in large quantities, and during a number of days, and without the adjuvant of a cathartic, for the emulsion itself when thus administered acts as a laxative; but we think an active cathartic should never be omitted, for its operation is capable of expelling a worm enfeebled by the effects of the medicine, but not to a

degree to insure its death if left in the alimentary canal. It may be proper to say, that among the people who have experience with domestic remedies, there is an opinion somewhat prevalent, that the pumpkin seed is an efficient remedy for the destruction of the ascarides lumbricoides, but I am not aware that this has been confirmed by the observation of the profession.

"EXCITO-SECRETORY."—SINGULAR MISAPPREHENSION.

Messrs. Editors :—I had supposed "the real intent and meaning „ of the phrase, *Excito-Secretory*, was, by this time, apprehended by the majority of the reading portion of the profession, but I have recently observed in an elaborate article, which need not for the present purpose be more directly indicated, a remarkable use of the term, which seems to demand a passing notice.

In the article alluded to, we are told, first, of "the excito-secretory system of nerves," and then, "the organic system," sometimes called the ganglion system, or great sympathetic nerve—the several phrases being used as synonymous.

The modern physiologist need not be told that this is a totally incorrect view, and we are led to believe the author used the terms inadvertently in the haste of composition. The author of the article alluded to, however, further confuses us by putting this "excito-secretory system" in *contrast* with the cerebro spinal system, which is wholly incorrect.

The mechanism of action, whether in the so-called cerebro-spinal, or the organic system, is identical, the resulting change depending, not on the nerve conductor, but upon the tissue reached. Histologically and physiologically, the cerebro-spinal system is as truly excito-secretory in its action, as is the so-called organic system.

All nerves are conductors of the excito-secretory influence which is generated by molecular changes at one end of the conductor, and is manifested by molecular changes at the other end of that conductor.

There is no distinct excito-secretory system of nerves, for *all* nerves are capable of this conduction.

The terms, excito-motory, excito-secretory, excito-sensory, etc., are altogether conventional and arbitrary, tending to observe the true simplicity of the natural phenomena. J. A. A.

SELECTED.

SOME PRACTICAL OBSERVATIONS

ON SMALL POX AND VACCINATION,

At Rock Island Prison Barracks, Rock Island, Ills.

By R. M. LACKEY, A. A. Surg. U. S. A., M. D.

There are few subjects in the medical world that have claimed the attention and study of physicians more than small pox. Every medical writer for centuries past has treated of it, some devoting themselves exclusively to its study, the most valuable results attending their labors. It is, however, a source of regret that, nearly three-quarters of a century after the achievements of Jenner, small pox should still prevail, notwithstanding we have daily evidence of the power of vaccination, when properly employed, to arrest the ravages of this loathsome disease. From its earliest recorded history small pox seems to have prevailed extensively in large armies, the presence of which, in this country during the past three years, I think may be regarded as the exciting cause of its general prevalence, the contagion becoming more powerful by concentration, the predisposing cause being negligence in regard to vaccination, and the large number of persons who are consequently unprotected.

The appearance of the disease here was almost simultaneous with the first arrival of troops for garrison duty, but it did not begin to spread to an alarming extent until a fortnight or more after the arrival of the first lot of prisoners, which was about the 5th of December, 1863. From Jan. 1st, 1864, to about March 1st, it spread rapidly and almost entirely among the prisoners; some days as many as forty new cases occurred. As there had been no buildings erected for hospital purposes outside the prison yard some old dwelling-houses on the island were used as a Pest-Hospital, and men sick with small pox were crowded into these, where they suffered from exposure and insufficient ventilation, until better accommodations were provided. Although there are few who have never been vaccinated, yet the number of bad cases that occur is large; thus out of 558 cases admitted, there were but 44 that had never been vaccinated; yet out of this number 166 had confluent small pox. This may be accounted for by the fact that, of the 514 that had been vaccinated, there were 107 on whom the vaccination had not taken effect, and 59 in whom the matter used was evidently bad, as is shown by the character of the scars; and in 38 cases the variola and vaccine disease occurred simultaneously, making in all 204 that were unprotected. The whole number admitted to small pox hospitals to this date is 1165; of these 335 have died, or one in 3.17. Of confluent cases the deaths have been about 75 per cent. This would show a heavy mortality but for the condition of these men when attacked. Many of them are almost exhausted by other diseases, and a large number die during the first week of the eruption.

In the treatment of small pox several plans and remedies have been employed, and pronounced by some to have the power of aborting the disease. The Saracenia Purpurea, so highly recommended by Dr. Morris, of Halifax, N. S., and others, has been used here to some extent, but its employment has not been followed by the marvellous effects claimed for it; as soon, however, as another supply can be procured, we propose to give it a further trial, and hope to be able to report more favorably.

It has been asserted by some that vaccination, even after the variolous eruption has appeared, modifies the disease, and this course has been recommended; but observations here have not confirmed the truth of this statement. I have carefully observed thirty-eight cases in which the vaccine disease and small pox occurred simultaneously, and there was not a

case in which the vaccination seemed to be of any benefit; but in some cases the variolous modified the vaccine poison, making the vesicle smaller than usual, and in others the vaccine vesicle became contaminated with the variolous poison, and ran the same course as the small pox pustules. I see no object, therefore, in vaccinating after the variolous eruption has appeared.

The treatment which seems to be attended with the best results here is, to open the bowels freely at the onset of the disease, and, if there be much nausea, an emetic may be advisable to assist in freely unloading the stomach. Some of the saline laxatives are given to keep the bowels soluble during the course of the disease. For restlessness and wakefulness Dover's Powder in 10 gr. doses at bedtime. After the secondary fever has subsided it is necessary to use all the supporting means at our disposal—quinine, wine, iron, egg-nogg, and nourishing diet. For the throat affection that so frequently occurs from about the sixth to the eighth day, we have been using bromine by inhalation, and with very decidedly beneficial results. Frequently the tongue and throat swell enormously in a few hours, so that the patient can neither speak nor swallow, and suffocation seems imminent. In these cases we have seen the swelling diminish as rapidly as it came, from the use of this remedy. An inhaling apparatus may be extemporized by two tubes placed in the cork-stopper of a wide-mouthed bottle. From the fourteenth to the twenty-first day, pneumonia is most to be feared, and nearly all the cases in which it occurs prove fatal. Treatment is of but little avail, except to palliate as far as possible the sufferings until death relieves the victim. Erysipelas is very prevalent; nearly 25 per cent. of the whole number of patients are in the erysipelas ward. For this we find the local and constitutional use of iodine and bromine, with prompt support, the best treatment. Abscesses and sloughing are very common among anæmic subjects. I have seen the scrotum and penis nearly all slough away before death took place. For the abscesses, when they become extensive and the parts gangrenous, we have found the injection of a weak solution of iodine, after the pus is evacuated, very beneficial.

We have made use of a variety of external local applications—mainly for their soothing effects during the stages of maturition and decline. A very excellent soothing application is olive oil and kreosote, from ten to twenty drops of the latter to the ounce of oil. The oil softens the surface, and the

kreosote allays the itching, and, besides, its antiseptic properties are of some value. Another local remedy that we have used with great advantage, especially for the eyes, is glycerine. We usually take equal quantities of glycerine and water, and for the eyes the addition of a few grains of tannin to the ounce is beneficial. Where there are extreme dryness and soreness of the mouth, the glycerine mixture is an excellent application, not only in small pox but in other diseases.

Of the 558 cases of which I have taken notes, those between 15 and 20 bear the disease best; no bad cases occurring in those over 40 years of age recover; and no deaths have occurred in those who have a good vaccine mark.

Vaccination is the great disarmer of this terrible destroyer of human life; and the zeal manifested by some physicians in extending its blessings soon after its discovery is well worthy of imitation. As early as 1803 a voyage round the globe was undertaken for the sole purpose of extending vaccination. An account of it, translated from the *Madrid Gazette*, of October 14, 1806, begins as follows: "On Sunday, the 7th of last September, Dr. Francis X. de Balmis, honorary Surgeon of the Royal Chamber, had the honor of kissing the hand of his Majesty on his return from a voyage round the world, undertaken with the sole purpose of carrying to all the Spanish dominions beyond the sea, as well as to those of other nations, the inestimable blessing of vaccination." The greatest care was taken to have good virus, and everything necessary to insure success, as the account further states: "The persons attached to the expedition were several physicians with assistants, and 22 children who had not had the small pox, and were destined to preserve the valuable fluid by a successive vaccination from arm to arm on one after another in the course of the voyage."

After diffusing vaccination through Spanish America, and stablishing societies for its preservation, the Doctor determined to carry this "consolation of humanity," as he terms it, to Asia. A portion of the expedition was also sent to Peru, and it is said the vaccine disease was communicated to 50,000 persons without one unpleasant result. It is owing to the zeal and energetic labors of such men as Dr. Balmis that we have for a long time been comparatively free from those terrible epidemics of small pox that were once so common, and which threaten us again unless we carefully use the means to avert such calamities. The great evil is in the use of worthless or impure matter, as the following figures will prove:—

Of 558 cases of small pox 131 have been vaccinated once, 155 twice, 95 three times, 133 four times, and only 44 never. Of the 514 vaccinated, 285 have had the vaccine disease once, 103 twice, and 16 three times; 107 never. In 59 of the cases put down as having had the vaccine disease, it is evident that the matter employed was bad, as is shown by the sore or cicatrix on the arm, and from the fact that these men had unmodified small pox; thus making 166 cases in which vaccination was unsuccessful, either from worthless matter or carelessness in performing the operation. The virus furnished the Medical Department of the Army is very often worthless and harmful. Of 264 cases vaccinated only 147 were successful, and in these the failure I am confident, was not owing to the careless or ignorant manner of inserting the virus.

We are accountable for the failures of vaccination, for if good virus is used, and the operation performed by an expert, success will be the rule, and failure the exception. How then is vaccination to be made more effectual? First, it is evident that compulsory laws, bearing on the subject, must be enacted requiring children to be vaccinated at an early age, and no one should be considered protected unless pronounced so by some one authorized to vaccinate and competent to judge.

We must also devise means for obtaining and preserving genuine vaccine virus. We shall constantly meet with disappointments so long as we depend on that kept for sale in the shops, and by those who make it a business to traffic in the article. Let the medical societies in every city and county appoint as a board a certain number of their members, whose duty it shall be to always keep on hand, at whatever cost or labor, a perfectly reliable article of vaccine matter, from which source alone let physicians draw their supplies. In this way the traffic in this important article, and the impositions so often practiced by unprincipled and ignorant persons, will be at an end, and the blessings of vaccination generally enjoyed. Whatever errors or dereliction of duty there may be in regard to this matter in future, I trust there will be none that may be charged upon the medical profession.—*Am. Med. Times.*

CLINICAL LECTURES ON DIPHTHERIA.

By JOHN T. METCALFE, M. D.,
Prof. Practice of Medicine, University Medical College.

LECTURE I.

I will occupy your time this morning, gentlemen, by some remarks on two cases that have lately presented themselves to us, at our Wednesday's clinic.

The first has the following history, which I now read to you from the case-book:—

Margaret Johnson, seven years old, a well developed child for her age, came before the class complaining of loss of power over the vocal organs, and difficulty of deglutition.

Her mother stated that she had been in good health until three months before coming to the college, when she observed Margaret to be troubled in swallowing her food. Not only was the act performed with dtfficuly and with occasional apparent pain, but the fluid portions of her food would return through the nostrils, when the pharyngeal muscles contracted. Now and then, in vomiting, the food would pass as much through the nose as through the mouth. The child's intellect was apparently in a normal condition. She readily understood everything that was said to her, but lacked the power of intelligible expression.

Soon after the symptoms above noted made their appearance, the patient complained of torpid bowels, of dysuria, and loss of power over the lower extremities. A few days later the arms and hands were likewise affected, and it was observ- that the sight became less distinct than usual. There was convergent strabismus of the left eye. Hearing unaffected. Lately she she has slept uneasily, and snores heavily and continuously when asleep. At present the partial paralysis above noted exists, but without marked increase. The skin is cool; the pulse quicker than natural; the head drops forward on the chest, and can not be raised by voluntary effort. On each side of the neck the lymphatic glands, especially about the angle of the jaw, are enlarged. Conformation of mouth and tongue normal; pharynx red, but without membrane. On questioning the mother closely she told us, you remember,

that Margaret had been ailing for some days before the symptoms above mentioned had manifested themselves. She had had pain in deglutition, as evinced by the necessity of drawing the head downwards and forwards, and making a sort of grimace as one with a sore throat would do. She had been fretful, restless, weak, and without her usual appetite.

Another case which came before us a few days ago, I find thus noticed in Mr. James Moore's notes:—

Timothy Quinlan, æt. 8 years, came to the Clinic for difficulty about the vocal apparatus.

He has never been a robust child, but has never had any serious illness previously. His parents are people of good constitution, without hereditary or other disease. About a month ago, his mother observed him to be troubled with sore throat, but he had no apparent fever nor loss of appetite. Under the angle of the jaws she noticed sensitive lumps, as large as a hickory nut, which lasted until a physician was called in, who gave him medicine. This, his mother thinks, cured the lump and sore throat. His deglutition was painful.

During the time referred to, lasting about a week, the boy was troubled by a harsh, dry, cough, with great hoarseness and indistinctness of the voice, so that it was difficult to understand him in ordinary conversation; now he speaks like a person with cleft palate, and, according to his mother, his intelligibility is diminishing from day to day. His throat, on examination, shows great redness of the fauces, with apparent thickening of the mucous membrane, especially of the right side. There is a pendulous condition of the soft palate, as though the muscles supporting it had lost their tone. There is double converging strabismus. His pulse is natural; skin warm and slightly moist. Anxious expression of countenance. On attempting to cough, he is unable to make the short, sharp, explosive expiration which should constitute the act. It is more like a harsh, *blowing* sound. His appetite is not bad; bowels regular; urine not examined.

These cases, gentlemen, are interesting, as illustrating some points in the pathology of a disease which has given great anxiety to the medical profession in this country as well as in Great Britain, during the last few years.

Diphtheria is not a new disease, as many have supposed—partly from the new name by which it is now known, and for which it was indebted to Mr. Farre, the Registrar-General of England, and partly because many physicians of large experience have only of late met with it as an epidemic malady.

To the excellent monograph of Dr. Edward Heanlam Greenhow, and to the admirable lectures of Prof. Alonzo Clark, published in last year's *Medical Times and Gazette*, I refer you for much interesting matter concerning its history.

Most of us who have practiced fifteen or twenty years, will easily remember sporadic cases of diphtheria. It is only as an epidemic that it has been comparatively unknown.

I shall, in the first place, speak to you of the peculiar sequelæ, so well illustrated in our two patients—I mean the diphtherial paralysis—and will then endeavor to anticipate answers to such letters as I am constantly receiving from our graduates who have commenced practice, and, having fallen in with the disease under consideration, desire to know what I consider the best general treatment.

"Nerve affections following diphtheria consist chiefly of impaired, perverted, or excessive sensibility, together with a more or less complete paralysis of the muscles of the fauces, pharynx, tongue, lips, extremities, trunk, and neck. The frequency of the occurrence of these symptoms in the several sets of muscles being nearly in accordance with the order in which they have been named, those of the fauces being the most frequent, and those of the neck least so." Doctor Greenhow, from whose article in the August (1863) number of the *Edinburgh Medical and Surgical Journal* I make the foregoing extract, does not mention paralysis of the eye muscles. This is by no means unfrequent. It existed in the two cases I have mentioned to you, but is not relatively so common as they might lead you to suppose. Perhaps in order of frequency we might place it after that of the trunk.

The supervention of diphtherial paralysis varies much with regard to the time of its access. In the cases which I have exhibited to you, there has appeared, in one, to be scarcely any appreciable interval between the primary and secondary affections. But this is not the general rule. As we ordinarily see it, the loss of muscular power has come on after apparent convalescence from diphtheria proper. In some instances, patients have been removed from the physician's immediate care to convalesce in some distant place, after which the paralytic symptoms have developed themselves—in one case as long as two months after the first attack.

The practical deduction to be drawn from these facts is to avoid pronouncing your patient cured until several weeks have elapsed after apparent recovery. It is a general rule that the probability and extent of paralysis bear a direct ratio to the

intensity with which the antecedent diphtheria has manifested itself; and this latter may serve also to measure the extent to which loss of muscular power will go.

Nevertheless, this is a rule subject to numerous exceptions, as the cases referred to in this lecture will show. Indeed, in one of them it would not have occurred to a physician's mind, before our knowledge of diphtheria was as accurate as it has become of late years, to make any connexion between the slight attack of sore-throat and the faucial and other paralysis. In the boy's case, the child was not even obliged to go to bed, and continued to enjoy a good appetite during his apparently trivial indisposition. In some of the worst cases of diphtheria I have ever seen, there was no subsequent paralysis of any sort.

Among the sequelæ most calculated to cause anxiety on the patient's part is an apparent loss of sight. This depends, not on any organic affection of the retina, but is a muscular affair —the ciliary muscle being the one involved in paralysis. Patients will occasionally be unable to read the print of an ordinary book, who will yet clearly distinguish objects across a hospital ward. The use of appropriate glasses will often restore the power of vision.

The history of our patients will show you that the paralytic troubles are generally progressive; that is, they may attack any one part of the muscular system, increase in intensity, and subsequently travel, without any seeming rule, to others. Usually gradual in its development, the paralysis may exceptionally be sudden.

It is not always regular in its march. Thus, in one of my late cases, I would find the child able to use her arms and legs fairly on one day, on the next there would be much less ability to do so. On the following visit she would have undergone great improvement. So it was with the speech and with deglutition. Later in the disease convalescence became steady and uninterrupted.

In the patients whom you have seen there was no mention made of anæsthesia. This is not an unfrequent phenomenon. We may have it manifested in any part of the body. Usually I have observed it most markedly in the faucial and palatine mucous membrane. It follows the course of the muscular paralysis, and requires no especial consideration.

The same may be said of hyperæsthesia. In the course of convalescence from the paralytic sequelæ, there will now and then be much complaint from excessive tenderness of the affected muscles on pressure being made.

In some cases the patient complains of the skin being so tight as to give the sensation of a swollen member. This is merely a perversion of sensibility, as inspection will show no change in size, nor to the observer's touch will there be anything abnormal.

Among all varieties of diphtherial paralysis, the most interesting and the most dangerous is that in which the heart is the organ concerned. At times the pulse will grow more and more feeble and infrequent, until it finally ceases to be perceptible. In the case of a young lady to whom I was called, in New Jersey, death was due to almost instantaneous cessation of the heart's action. She was apparently in satisfactory convalescence, when on walking across the sitting-room, she suddenly dropped down and died. There was no previous organic disease of the heart, nor was there any brain lesion that would explain her abrupt death.—*Am. Med. Times.*

EDITORIAL AND MISCELLANEOUS.

[The following interesting article was received too late to be placed among original communications.—EDS.]

Creosote and Arsenic in the Treatment of Skin Diseases.—From the well-known prevalence and obstinate character of some of the cutaneous diseases of the North-Western States, frequently resisting alike the efforts of well-directed medical skill, the never-failing unguents, lotions, and alterative secretion regulating secret remedies of the presumptuous charlatan, and much-lauded specific nostrums of the patent medicine vendor, I desire, through the medium of your widely-circulating journal, to commend to the consideration of the profession, after an experience of fifteen years, the above articles in the treatment of cutaneous diseases.

Having kept no record of cases I have no data but memory from which to write. I shall, therefore, make a brief general statement of the manner in which I have been in the habit of

using the above articles, and if the statements which I may make should prove of benefit to any one of the profession, or any of the afflicted, my end will have been attained.

I have, during the time specified, treated many cases of these diseases, of various grades, and have found more good resulting from the use of creosote than from all the other articles which I have used. The diseases in which I have found it more particularly useful, are impetigo and porrigo, and more especially of these, porrigo larvalis of Millan and Bateman, or impetigo larvalis of the French writers; this variety affecting young children during the period of dentition, is a source of much annoyance both to nurses and doctors, to say nothing of the more serious consequences which may occasionally result from its long continuance, where it seems to baffle all the skill of practitioner and nurse.

This variety (for a description see Wood's Prac. of Med.,) sometimes discharges fluid so copiously that scabs can not form; it is in such cases that I have found the creosote to act most advantageously, and also in the particular cases of eruption of the scalp. I have been much gratified with its results, indeed, it has given entire satisfaction in almost every case where I have been able to fairly test its virtues. The manner in which I have found it to act most beneficially is in form of an ointment, made according to the following formula:—

℞. Adeps preparata, ℥j; Creosote, gtt. xxv. Mix on a clean tile or plate until the two are thoroughly incorporated. Apply the ointment with a camel's hair pencil or the tip of the finger to the parts affected, twice a day, cleansing it well with fine soap and rain water once a day. If the ointment in this proportion should be too strong for the particular case to which it is applied, the inflammation will be increased; this should be an indication for a lessening of the creosote; if on the contrary it is too weak, the eruption will heal very slowly or not at all, which is an indication for greater strength. The constitutional symptoms, if any are present, and it frequently so occurs, should be met at the same time with appropriate

remedies, and it is here that I have found arsenic, in the form of Fowler's Solution, more valuable than all the other alteratives and entrophics which I have used.

This may be very safely administered to small children if the nurses are sufficiently warned of the care necessary to be taken, to give only the prescribed dose. The manner in which I have usually given it is as follows: To a child from 2 to 6 months old, gtt. j; from 6 to 18 months, gtt. iss; from 18 to 24 months, gtt. ij; two or three times in 24 hours, increasing with the age. I have been in the habit of continuing the use of the solution for a length of time varying from two to six months, which practice would seem to suggest itself as being beneficial on account of the well-known properties of arsenic in promoting nutrition. J. ELLES LYONS, M. D.

HUNTINGTON, Ind.

At a recent meeting of the Chicago Medical Society, Dr. Bartlett presented a means of using chloroform, when its application must of necessity be frequent or immediate, as in convulsions, hooping cough, neuralgia, labor, etc. He recommended it also as a matter of economy. By its use the chamber of the patient is kept comparatively free from the odor of chloroform, to many disagreeable or sickening.

Into a four-ounce gallipot, Dr. B. fits a cup-shaped sponge, retaining it in place by a transverse stay of wood. The anæsthetic being poured upon the sponge, the pot is placed inverted in a saucer containing a little water (or mercury). The tention of chloroform vapor not being great and it being sparingly soluble in water, but little is lost. The sponge may be successfully used hours after the pouring on of the anæsthetic.

Illinois State Homœopatic Association.—This city has recently been favored with a meeting of this organization, and of its transactions we find an elaborate report in the *Chicago Tribune*. From this, we learn that one of the fraternity, having treated a case a long time without any benefit to the patient,

and it seems without knowing what the disease was, hit upon the happy expedient of taking him before the assembled wisdom of the Association to find out, whereupon the report says: "Dr. Ludlam moved that the physicians ballot for a diagnosis. The result of the vote was as follows: psoriasis inveterata, 5; skin disease, 1; eczema rubra, 5; tetter, 1; rara avis in terra, 1; leprosy, 3; natrum muriaticum, 1; psora, 1; blank, 3; Persian leprosy, 2."

Could this question be determined by the weight, rather than the number, of opinions, we have no doubt the *savant* who diagnosed "skin disease," would have the question by an overwhelming preponderance. The President, Dr. Smith, said he had cured a case of phthisis pulmonalis, by administering a single dose of phosphorus. "The patient was the daughter of a homœopathic physician, and as there were no allopathic prejudices to be overcome, this might account for the rapidity of the cure." The points of interest omitted in the report of this case are,—the number and magnitude of the cavities that were present in the lungs, and what influence "allopathic prejudices" have on the action of phosphorus.

This nearly equals a case related by Hahnemann, in which powerful effects were produced on a patient, by smelling at a vial, in which a small pill, moistened with a medicine of the thirtieth attenuation, had been placed twenty years before.

Dr. Beebe introduced a resolution that is entirely inexplicable to us, which goes on to recite, "That while we revere and respect the chief Magistrate of the nation, and will ever prove loyal to the government, we deprecate and earnestly disapprove his compromise of character and self-respect in the utterance of an anecdote accredited to him." This resolution leads us to suspect that this meeting was not entirely a scientific one, but that under this cloak were concealed political objects, designed to overthrow the hopes of Mr. Lincoln for another term. It was clearly unjust to the President to censure him for an "anecdote accredited to him," without specifying what anecdote it was, and thereby give him an opportu-

nity either to deny it or justify himself to the parties who feel themselves so much aggrieved. Why did they not put the "anecdote" in the "belly of the resolution," as Mr. Benton would have said. We have heard but one story accredited to Mr. Lincoln, relating to homœopathists, and what that one can have to do with the "loyalty" of the members of the Association, we can not conceive. We write in a state of pain ful doubt and curiosity as to what the anecdote was.

Medical Graduates for 1864.—Jefferson Medical College, 124; University of Pennsylvania, 101; Bellevue Hospital Medical College, 95; Rush Medical College, Chicago, 80; College of Physicians and Surgeons, N. Y., 72; Medical Department of University, N. Y., 59; Buffalo Medical College, 41; Starling Medical College, 32; Medical College of Ohio, 31. Cincinnati College of Medicine and Surgery, 30; Chicago Medical College, 17; Med. Department of University of Pacific, 7.

Some one has said, "Try all things; hold fast that which is good."—*Ohio Med. and Surg. Journal.*

To attribute one of the most familiar injunctions of Paul to "*some one*," reminds us of a preacher we used to hear in the days of the early settlement of Illinois, who in one of his sermons was urging the importance of giving to the young, proper instruction, and feeling in his own person the inconvenience growing out of a neglect of this duty, and wishing to enforce his views by the sanction of Scripture, did it thus:—"For, my friends, it is written in this inspired Book," placing his hand at the same time, with great emphasis, on the Bible, "Just as the twig is bent the tree is inclined."

Mortality Among Hospital Physicians.—Five members of the resident medical staff of Bellevue Hospital, city of New York, have paid the forfeit of their lives, and ten more have barely escaped death, since the 1st of May last, from fever, contracted in the discharge of their duties to the patients in that institution. The *Medical Times* charges the mischief to imperfect ventilation.

BOOK NOTICES AND REVIEWS.

MEDICAL DIAGNOSIS, WITH SPECIAL REFERENCE TO PRACTICAL MEDICINE.—*A Guide to the Knowledge and Discrimination of Diseases. By J. M. DaCosta, M. D., Lecturer on Clinical Medicine, and Physician to the Philadelphia Hospital; Fellow of the College of Physicians of Philadelphia; Member of the Pathological Society of Philadelphia; Corresponding Member of the New York Pathological Society, etc., etc. Illustrated with Engravings on Wood. Philadelphia. J. B. Lippincott & Co.* 1864.

In the preface the author states that his aim in writing this work has been to furnish advanced students and young graduates of medicines with a guide that might be of service to them in their endeavors to discriminate disease. And it will be readily conceded that every new fact which facilitates the discrimination of diseases, is an acquisition to medical science; that every appliance by which the signs or symptoms of disease are more distinctly pronounced; that every improvement in the arrangement or grouping of these signs and symptoms which render our diagnosis more ready and certain, are steps in the progress of improvement.

Great improvements have been made in the treatment of diseases within the last few years, and it will not be denied that the greater success of medical practice to-day, is due in no small degree, to a more accurate diagnosis, than it was possible to reach twenty years ago. The time has gone by when the physician can limit his means of diagnosis to the exercise of the special senses, vision, touch, etc.

Formerly we could go no further than these senses unassisted would carry us. But science has lent its aid, and furnished means by the help of which we can detect clearly what before we could not detect at all, or of what at best we only caught a glimpse. We now posess instruments by which we ascertain with accuracy the size of organs and their play. With thermometers we tell the heat of various parts of the body to a fraction of a degree. Specific-gravity bottles, and other measures devised for the purpose, inform us of the relative gravity of fluids. The microscope gives at a glance insight into mat-

ters far beyond anything the naked eye discloses. And chemistry, with its marvelous teachings, is rendering our knowledge of many morbid states admirably and amazingly complete. Then, too, the sagacity of modern times has taught us how to enlist the sense of hearing, and demonstrated how a disciplined ear may detect almost infallibly the workings of disease in cavities into which the eye can not penetrate. The effect of all these improved methods of study has been to give an immense impetus to clinical research, and in this manner to construct a solid groundwork of experience in striking contrast to the looseness and wild vagaries of former times. The advance in diagnosis thus attained forms indeed one of the most pleasing portions of medical history.

When, by means of the aided or unaided senses, the symptoms of the malady have been discovered, the next step toward a diagnosis is a proper appreciation of their significance and of their relation toward each other. Knowledge, and, above all, the exercise of the reasoning faculties, are now indispensable. The daily habit of investigating disease; an active pursuit of the anatomical lesions; chemistry, with its most searching analyses; the microscope, with all the wonders it reveals,—are all of little use, unless they have taught the necessity of placing the morbid signs they lay bare in connection with each other, and of considering in individual cases their respective value. Were it otherwise, the science of diagnosis would be simply a matter of memory. It is, however, this very analysis of symptoms, and the lengthy process of induction attending it, that makes medical diagnosis so difficult and so unattractive to the beginner.

* * * * * *

Now, to accomplish all this effectually, the physician has need of much and varied knowledge. He must be master of something more than of that information supplied to him at hand by semeiology. He must be an anatomist to pronounce on the seat of the malady. He must be a physiologist to appreciate the aberration of functions. Above all, he must be a pathologist in the full sense of the term. He must understand the antagonism between diseases; the frequency with which they coexist; the influence of remedial agents on them. He must be cognizant of their natural history and of the general laws governing them—for how else can he form an estimate of morbid action while it is in progress? Then, too, it is desirable that he should be aware of what are their current divisions and classifications.

The author has given us, in this book, a clinical classification of the manifold and ever-varying features of disease, which, while it could be produced only by great labor, enhances immensely its value as a guide in practice. The plan followed is sufficiently indicated in the following brief analysis of the table of contents, viz., After the introductory general considerations,

Chapter I. Treats of the Examination of Patients, and some symptoms of general import.
" II. " " Diseases of the Brain, Spinal Cord, and their Nerves.
" III. " " Diseases of the Upper Air Passages.
" IV. " " " " Chest.
" V. " " " " Mouth, Pharynx, and Œsophagus.
" VI. " " Diseases of the Abdomen.
" VII. " " the Urine, and Diseases of the Urinary Organs.
" VIII. " " Dropsy.
" IX. " " Diseases of the Blood.
" X. " " Rheumatism and Gout.
" XI. " " Fevers.
" XII. " " Diseases of the Skin.
" XIII. " " Poisons and Parasites.

We have no hesitation in saying that the author in producing this work has conferred a real benefit upon the profession, and that no medical library is complete which does not contain a copy.

A Treatise on Pharmacy, Designed as a Text-Book for Students, and as a Guide for Physicians and Pharmaceutists, Containing the Officinal and many Unofficinal Formulas, and numerous examples of Extemporaneous Prescriptions. By Edward Parish. Third Edition, Thoroughly revised and improved, with important additions. With two hundred and thirty illustrations.

The present edition of this standard and popular work is greatly improved upon the last, is more ample, and is brought fully up to the present status of the science of art and phar-

macy, and contains the working formulas for the old and new remedies recognized by the last edition of the Pharmacopœia, as well as many that are not officinal. From the title of the work, physicians might infer that it would not be of great value except in pharmacy, but this is an error, for many portions of it are as valuable to the physician in prescribing and administering medicine, as others are to the practical pharmaceutist. Especially will the practitioner be interested and instructed by the chapters on prescriptions, and on the art of selecting and combining medicines.

It contains, too, a large number of extemporaneous combinations of medicines, arranged according to their proper classifications. In short, it is a book that no person engaged in the practice of pharmacy or medicine, should fail to be familiar with. It is a work of more than 800 pages, and being issued by Blanchard & Lea, of Philadelphia, the execution of it is unexceptionable.

Death of Dr. Cheney.—At the meeting of the Chicago Medical Society, on Friday evening, May 6th, the following resolutions were adopted:

Resolved, That in the death of L. P. Cheney, our Medical Society has lost a highly esteemed member, our profession a laborious and conscientious practitioner, and our community a warm-hearted, useful and noble man.

Resolved, That while we deeply mourn our loss, we tender our heart-felt sympathies to the bereaved family and relatives and large circle of friends.

Resolved, That a copy of the foregoing be transmitted to the family of the deceased, also to the daily city papers, the *Chicago Medical Journal*, and the *Medical Examiner*, for publication, and that they be transcribed upon the records of this Society. J. P. Ross, M. D., H. W. Jones, M. D., Orren Smith, M. D., } Committee.

John Redman Coxe, M. D.—Dr. Coxe was the oldest graduate of the Medical Department of the University of Pennsylvania, in which institution he was for many years a Professor.

He was born in Trenton, New Jersey, on the 16th of September, 1773. He was educated in Philadelphia, under the charge of his grandfather, Dr. John Redman, until his tenth year, when he went to England, where he remained at school until his seventeenth year, when he went to Edinburgh to complete his classical education; while there he attended a course of medical lectures at the University. He returned to America in 1790, and at once commenced the regular study of medicine with Dr. Benjamin Rush, with whom he remained until 1794, when he received his diploma. While with Dr. Rush he was actively engaged in practice during the severe visitation of the yellow fever in 1793, at which time three of his five fellow-students died of the fever. Immediately after graduating he went to London, and became a house-pupil at the London Hospital, and remained there nearly a year. He then went to Edinburgh, and attended a course of lectures at the University; thence to Paris, where he pursued his medical studies for three months. He then returned to London, where he spent several months in the hospitals. He returned to the United States, and settled in Philadelphia in the winter of 1796–7, when he at once entered upon the active practice of the profession for which he had been so carefully preparing himself by many years of study.

Dr. Coxe was appointed, by the Board of Health, physician to the port during the second visitation of the yellow fever, in 1798. He was for several years one of the physicians of the Pennsylvania Hospital, and also of the Philadelphia Dispensary. He was largely engaged in private practice, when, in 1809, he was elected Professor of Chemistry in the University of Pennsylvania, from which chair he was transferred, in 1818, to that of Materia Medica and Pharmacy, which he held until 1835. For many years he has been leading the quiet and retired life of a student. Dr. Coxe was one of the earliest introducers of vaccination into the United States, and was the first to introduce it into this city. His name has for more than half a century been a household word in connection with the Hive Syrup (*Syrupus Scillæ Compositus*, U. S. P.) which he invented, and which has proved such an inestimable blessing to thousands. He has passed away quietly, without disease, at the advanced age of ninety years and six months, having never been sick in all that time.—*Reporter.*

DEATH OF DR. ROBERT P. THOMAS. We observe with sorrow, the death of this gentleman noted in the Philadelphia *Med. and Surg. Reporter*. He was the editor of the last edition of *Ellis' Formulary*, a notice of which is in the present number of the *Press*. A singular mortality has attended this work, Ellis, its author, and Morton and Thomas, successively its editors, having passed away in the prime of life.—*San Francisco Med. Press.*

DEATH OF PROFESSOR RIBES.—M. Ribes, professor of hygiene at the Faculty of Montpellier, has lately died at Perpignan, his native place, at the age of sixty-three. The deceased, published, three years ago, an important work entitled "Therapeutical Hygiene," and had previously enriched medical literature with valuable works, essays, and speeches.—*Lancet.*

City Mortality.—The following is the mortality of Chicago for six years past:

	1858.	'59.	'60.	'61.	'62.	'63.
January,	117	131	115	193	174	321
February,	126	115	128	135	197	294
March,	156	132	180	172	199	298
April,	116	155	131	126	187	300
May,	139	115	102	134	166	257
June,	139	112	155	131	156	219
July,	268	164	133	239	274	414
August,	377	325	308	262	304	341
September,	238	190	172	227	271	323
October,	102	160	149	120	246	258
November,	136	102	170	155	196	220
December,	135	125	158	195	203	230
Total,	2,049	1,826	2,056	2,069	2,575	3,475

Chronic Ulcers.—Dr. Skey says, "I have treated a large number of these affections, and with success. The more chronic the ulcer, the larger its size, the more aged the subject, the more remarkable is the influence of opium in effecting a cure. Let a case be selected for experiment, of some twenty years' duration, which has exhausted the patience of

various medical attendants, as well as the remedies employed by them for cure.

"Treat such a case of chronic ulcer, of the largest size, having a pale, flat, bloody base, a high mound lymped around it, covered by healthy integument, the sore pouring out large quantities of watery ichor, saturating every covering. Select such a case occurring in old age: give such a person ten to fifteen erops of tincture of opium night and morning, leaving the bowels alone, and observe the base of the sore in five or six days: it will exhibit a number of minute red points, which, daily increasing in number, will rise up in the form and identity of healthy granulations, and cover the entire surface of the ulcer; and at the same time the base is becoming elevated, the margin becomes depressed, and the process of cicatrization is commenced.

"No injury to the constitution attaches to the use of this remedy, its salutary action upon the ulcer is obtained solely through the healthy influence it exercises upon the constitution."—*London Lancet.*

Death From Chloroform, in San Francisco.—Mrs. ——, a native of California, of highly nervous temperament, went to a dentist's to have a tooth extracted. She had a great dread of the instruments, and while much excited, chloroform was administered, by holding a napkin above and near the nostrils. She had some difficulty in managing the respiration, and, after inhaling it imperfectly a short time, complained that she could not take it, and seized the hand of the operator, removing it from her face. Without using the chloroform any longer, her hands were held, and the tooth extracted without difficulty. Immediately after the withdrawal of the forceps from her mouth, her jaws were clenched and her head thrown back, by spasmodic contraction of the muscles. The breathing was arrested, the face grew livid, and death rapidly ensued. The immediate cause of death appears to have been apnœa, from the spasmodic closure of the glottis or larynx. The masseter, respiratory and spinal muscles, and also the flexors of the extremities, continued in a state of tonic spasm till relaxed by death. We are satisfied that there was no mismanagement of chloroform in this case—unless to use it at all be a mismanagement. There is quite as much reason to allege that it was not pushed far enough, as that it was pushed too far. Possibly a longer inhalation would have carried her safely beyond the range of spasm, and into the tranquil region of anæsthesia. There was no disease of the heart or other organs to discourage the use of the agent.—*San Francisco Med. Press.*

Berkshire Medical College.

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ORIGINAL COMMUNICATIONS.

REPORT OF SPECIAL COMMITTEE ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

PRESENTED TO THE ILLINOIS STATE MEDICAL SOCIETY, MAY, 1864.

MR. PRESIDENT—GENTLEMEN:

Your committee would most respectfully report, that no contributions, either from members of this Society or from the Profession generally, have been received, although due notice of the appointment of this Committee was published in both medical journals of this city, with the request that the physicians of the State would aid the Committee in accomplishing the objects for which the Committee was appointed.

The following report, therefore, is composed entirely of materials collected in the personal experience of your Committee. In the first part of the report is a classification of the diseases, which have fallen under the observation of your Committee during the past eight years, and principally during the past five years.

The table may be supposed to present the relative number of cases of each disease, as found among patients with affections of the eye, in the North-west.

In the second part, your Committee had designed to furnish the history of several cases, which might be of particular interest to the profession; but thought best, without entering too much into detail, to ask the attention of the Society to some general principles, worthy of notice in the study of each class of disease.

Unfortunately, in several respects, the classification of diseases is imperfect. It is proper to state, that the numbers indicate number of patients and not of eyes affected.

The defect arose from the fact, that the annual reports of the Chicago Charitable Eye and Ear Infirmary, embracing more than 1400 patients, were prepared, not so much for scientific classification, as for the purpose of presenting to the public the number of patients treated, and the popular names of the diseases. When patients have been under treatment with each eye affected with a different disease, the most important alone was registered. And, whenever an eye was affected with several diseases, as, for instance, granular conjunctivitis, vascular cornea, trichiasis, entropion, or other complications, simply the primary disease has been recorded.

A few points in some sections of the following table, which may appear strange to members of the Society, will be subsequently explained:

I DISEASES OF THE CONJUNCTIVA.

Conjunctivitis Catarrhal,	197
do Granular,	628
do Purulent,	32
do Neonatorum,	33
do Pustular,	114
do Morbillous,	21
do Diphtheritic,	3
Injuries and Burns,	67
Xerophthalmia,	4
Pterygium,	15
Pinguicula,	10
Ecchymosis Spontaneous,	4
Total,	1128

II. DISEASES OF THE CORNEA.

Corneitis Ulcerative,	109
do Superficial,	19
do Suppurative, Hypopion,	7
do do Onyx,	5
do do Abscess,	11
Staphyloma of Cornea,	26
Opacity of Cornea,	64
Tumor of do	1
Conical do	2
Motes on do	61
Total,	305

III. DISEASES OF THE SCLEROTIC.

Injuries of Sclerotic and Cornea,	45
Staphyloma of Sclerotic,	2
Episcleritis,	2
Total,	49

IV. DISEASES OF THE LIDS.

Ophthalmia Tarsi,	84
Trichiasis,	40
Entropion,	19
Ectropion,	14
Hypertrophy of Palpebral Integ.,	2
Abscess of Lids,	13
Hordeolum,	11
Cystic Tumors,	22
Eczema,	7
Symblepheron,	4
Wounds,	23
Warts,	1
Ptosis,	8
Lupus,	1
Oedema,	15
Nevus,	2
Molluscum of Lid,	1
Total,	217

V. DISEASES OF THE IRIS.

Iritis,	52
do Syphilitic,	18
Iridochoroiditis,	13
Occusion of Pupil,	15
Coloboma of Iris and Choroid,	4
Mydriasis,	3
Wounds of Iris,	3
Adhesion of Iris and Lens,	10
Total,	113

VI. DISEASES OF THE CHOROID, ETC.

Choroiditis,	21
do Pigmentosa,	22
Sclero Choroiditis,	16
Staphyloma Posticum,	4
Opacities of Vitreous Humor,	31
Coagulum in Vitreous Humor,	1
Glaucoma,	3
Total,	98

VII. DISEASES OF THE RETINA.

Retinitis,	20
do of Bright's Disease,	4
Congestion of Retina,	17
Detachment of Retina,	5
Atrophy of Optic Nerve, (papilla,)	3
Hemeralopia,	2
Embolie of Art Cintralis,	1
Cancer of Retina,	5
Muscæ Volitantes,	9
Extravasation of blood under retina,	2
Amblyopia,	32
Amaurosis,	35
Total,	135

VIII. DISEASES OF THE LENS.

Cataract Incipiens,	13
do Hard,	20
do Soft,	17
do Pyramidal,	11
do Congenital,	2
do Trumatic,	12
do do layer,	6
Dislocation of Lens Traumatic,	2
do do Spontaneous,	1
Total,	84

IX. DISEASES OF THE GLOBE.

Atrophy of Globe,	14
Fungus Hæmatodes,	1
Hydrophthralmos,	2
Microphthalmos,	2
Sympathetic Ophthalmitis,	8
Total,	27

X. DISEASES OF THE MUSCLES.

Strabismus,	19
Paralysis of 3d Pair of Nerves,	7
do 4th do do	4
do 6th do do	1
Blepherospasm,	2
Nystagmus,	12
Total,	45

XI. DISEASES OF THE LACHRYMAL APPENDAGES.

Abscess of Lachrymal Sack,	5
Obstruction of Nasal Duct,	20
Congenital Fistula of Sack,	1
Obliteration of Canalliculi,	1
Passage of air through do	2
Eversion of Punctum Lachrymal,	8
Total,	32

XII. DISEASES OF THE ACCOMMODATIVE APPARATUS.	
Myopia,	8
Presbyopia,	3
Asthenopœa,	35
Hypermetropia,	2
Total,	48

XIII. DISEASES OF THE ORBIT.	
Necrosis of Orbit,	1
Carcenoma of Orbit,	1
Aneurism of Orbit,	1
Neuralgia,	5
Total,	8
Total of all Diseases of the Eye,	2289

From this table it will be observed, that diseases of the conjunctiva form by far a greater class, than those of any other portion of the eye. To this class may be added a large part of the diseases of the lids and cornea, since they are but sequelæ of conjunctivitis. A large number of blind patients, that have been examined, lost their vision as a result of this disease, and there are reasons for believing that a very large portion of the blind in the blind asylum, and other portions of the State, lost their sight from neglected or maltreated inflammation of the conjunctiva.

In many parts of Illinois and the North-west, these diseases are very common, and are the cause of more pain and misery than almost any other disease. Your Committee, therefore, believes it is the duty of every practitioner in the Western States to make conjunctivitis the subject of special study. Every opportunity should be provided medical students for the clinical study of these diseases and their treatment.

A few words regarding the causes of conjunctivitis at the West, are perhaps not out of place, though little can be said in addition to what has already been reported at previous meetings of this Society. The opinions, formerly expressed, were almost entirely founded upon the views and experiences of others, since there has not been, during the past eight years, a single epidemic of conjunctivitis in Chicago. An honored member of this Association, who has enjoyed a long experience and extensive opportunities of observation, has informed your Committee, that he believes epidemics of conjunctivitis are not dependent upon the prevalence of dust or upon the dryness of the atmosphere, since they have often occurred when the prairies were covered with moisture. It is true, few places

experience more violent winds, loaded with more dust, than Chicago; and yet, as has been stated, epidemic conjunctivitis is perhaps unknown in this city. Still, physicians generally seem to consider these agents as among the most active causes of the disease.

It is certainly to be hoped that all members of this Society, who may have an opportunity of observing epidemics of conjunctival inflammation, will report all facts relating to the condition of the atmosphere, surface of the country, the habits and occupation of the patients.

One word only in regard to treatment. In ordinary uncomplicated cases of acute conjunctivitis, your Committee is convinced that success in treatment depends principally upon the skillful use of caustic astringents. They should not be dropped into the eye, but applied directly to the mucous membrane of the lids, by means of a delicate brush, the secretions having first been removed by gentle applications of a bit of linen.

There is reason to believe, in the treatment of chronic conjunctivitis, that practitioners, generally, in the West, use these remedies too strong. Slight applications of the crystal sulphate of copper have given best satisfaction to your Committee in the largest proportion of cases.

Four typical cases of Xerophthalmia have been observed. One was remarkable, as resulting from phlyctenular conjunctivitis. The patient was five years of age; the palpebral conjunctiva of the right eye was totally absorbed, and the edges of the lids brought in direct contact with the cornea, which was covered with a dry translucent membrane like parchment.

But three cases of true diphtheritic conjunctivitis have been noticed. Unfortunately two cases in children terminated with almost total destruction of vision; your Committee was discharged from the third case in consequence of the unfavorable prognosis which was given. The subsequent history of the case is unknown. There is reason to believe that this disease, not uncommon in Europe, is quite rare in this country, although the corresponding affection of the throat is at times fearfully prevalent.

Nearly one-seventh of all the cases above enumerated are affections of the cornea. Many interesting points connected with these diseases, especially in children, are worthy of separate papers. Although quite a large number of cases of corneitis in children were accompanied with caries of the teeth, only four examples have been observed in which the teeth have been notched, as described by Mr. Hutchinson. By far the greater part of the patients affected with primary corneal disease have been of an unhealthy diathesis; a few cases only being in patients in whom the health was apparently perfect.

The treatment of certain injuries of the cornea and sclerotic will be discussed in connection with sympathetic ophthalmitis.

There have been but few cases of diseases of the lids, which have presented points worthy of remark in a report like this. One case of molluscum of the upper lid is mentioned as the only one ever observed by your Committee in his own practice or in that of others.

In the last report of this Committee, your attention was called to the treatment of certain forms chronic conjunctivitis, recommended in the first volume of Archives for Ophthalmology, and in the annual report of Pagenstecher and Saemisch. This treatment, which consists in elongating the palpebral fissure and in introducing vertical stitches throught the integument and the orbicular muscle of the upper lid, has been found of special service in spasm of the lids, with tendency to entropion, and union of the lids at the external angle.

Certain cases of trichiasis, attended with great atrophy of the palpebral conjunctiva and of the tarsal cartilage itself, have been found difficult to relieve. The bulbs of the cilia appear so deep and misplaced in the tissues, that any efforts to remove them by scalping the edge of the lids, only add to the atrophy and fail to improve the condition of the organ. Fortunately, however, such cases are not frequent.

About five per cent. of the patients treated have been with affections of the iris. Your Committee has never attempted to conduct the treatment of iritis without the use of mercury,

although high authority has shown that the disease may thus be successfully treated. Success with the use of calomel and large and repeated doses of atropia locally, have created an unwillingness to modify this plan of treatment. Excision of a part of the iris, as recommended by Graefe, in chronic iritis with attachments of the iris to the lens, has been performed apparently with great benefit in three cases.

Three cases of injuries of the iris are somewhat remarkable. Two are cases of detachment of the iris from the ciliary muscle, produced by slight blows upon the eye. The separation extended about one-eighth of the circumference, in one case in the upper and outer, and in the other in the upper and inner quarter of the iris. In the former, recovery with almost perfect vision, but with a double pupil, was the result. In the latter, there was a second pupil and a traumatic cataract. The other case of injury was even more remarkable. A boy, seven years of age, received the sharp point of a pair of scissors in the right eye, which penetrated the cornea, iris, and possibly the lens, near the middle of the lower and outer quarter of these organs. The wound in the cornea healed with a very faint nebulous cicatrix; the iris was left with a small but permanent opening at the point of injury. No opacity of the lens could be perceived. Vision remained perfect. The treatment was simply low diet, absolute rest, and wet compresses.

The classification of the diseases of the vitreous humor, choroid and retina has been based entirely upon the abnormal changes, discovered by means of the ophthalmoscope. Whenever the line of demarkation between the papilla of the optic nerve and the retina has been indistinct, presenting the appearance represented by tables X, figure 4, of Liebreich's Plates, and tables X and XI of Jaeger's, the disease has been classified as retinitis. In those cases where absorption and deposition of pigment have been observed, with or without the peculiar yellow-colored patches so often seen, the disease has been termed choroiditis. Ophtalmologists are apparently not all satisfied with the term retinitis pigmentosa. There is rea-

son to believe in many cases the disease is an affection of the choroid as well as of the retina. In no instance has your Committee found this disease connected with consanguinity or idiocy, as observed by some writers.

Four cases of characteristic disease of the retina in patients affected with morbus Brightii, have been carefully studied. It is a matter of interest to ascertain the proportion of patients with this disease of the kidneys, who also suffer from amaurotic symptoms. A large number of patients with amaurotic symptoms have applied for treatment, where an examination with the ophthaloscope was not permitted. These diseases were simply recorded as amblyopia or amaurosis, and no treatment instituted.

Glawcoma is evidently not a common disease at the West. Only three cases of this affection, and no others with dilated pupil and abnormal hardness of the globe, has been observed in Chicago, by your Committee.

As your Committee intends, at some future time, to make cataract the subject of a special report, nothing need be said at present upon the cases in the section of the above table devoted to diseases of the lens.

Eight cases of sympathetic ophthalmitis have been observed with total loss of sight, in which perfect vision of one eye could evidently have been saved by the early removal of the eye primarily injured. Quite a large number of cases have been noticed, where punctured and incised wounds of the globe have been followed by long distressing inflammation of the eye. No treatment seemed to afford relief till, after weeks and months of suffering, the patients permitted the extirpation of the eye. It is true the majority of such injuries heal without these violent symptoms, and your Committee would not urge an indiscriminate mutilation of these patients. But is it not a question worthy of consideration, as stated in the last report, whether it is not better to sacrifice a sightless and inflamed eye after due delay, than to endeavor to save the form of the eye simply, at the risk of total blindness? It is neces-

sary to distinguish one very common form of sympathy in these cases, from true sympathetic ophthalmitis. The first is simply a mild degree of irritation, with secretion of tears, and slight photophobia in one eye, when the other is excited, as for example, by the presence of a minute object under the lid. The other is a dangerous inflammation of the choroid, iris and retina, which, if it has once commenced, there is reason to believe, is seldom relieved by the removal of the other eye. Hence your Committee would urge upon the general practitioner the propriety of operating before this serious form of disease has supervened.

Although the abscision of the cornea and iris is often attended with good results, the experience of many of the most celebrated oculists seems to favor the total extirpation of the eye.

One case of congenital fistula of the sack, in a boy seven years age, and two cases in which considerable annoyance was caused by the passage of air through the canalliculi on blowing the nose, are simply worthy of attention as being unusual. The operation of slitting the canalliculi, as recommended by Bowman in cases of eversion of the puncta, and the use of injections in the early stages of obstructions of the nasal duct are among the most satisfactory operations in ophthalmic surgery. Your Committee, although unwilling for slight causes, to sacrifice an organ, yet believes, in view of the want of patience and fortitude on the part of so many, especially the poor, suffering from chronic and neglected diseases of the duct, that much discomfort can be prevented by the obliteration of the sack.

No cases of more than ordinary interest, in diseases of the muscles have been noted.

But few cases of anomalies of the refracting media have been under the care of your Committee. This is explained by the fact that patients suffering from myopia and presbyopia usually apply to the optician, rather than the oculist, for advice. Your Committee has not been in the habit of making careful

examinations of eyes affected with strabismus, in reference to the existence of myopia or hypermetropia, neither has he instituted suitable investigations to determine whether asthenopia was dedendent upon weakness of the recti muscles, or upon hypermetropia—formerly termed excessive presbyopia.

Not a single case of astygmatism, or difference of convexity or density of the refracting media in different meridians, has been detected, although no investigations were made by your Committee till within two years.

The attention of the Society is called to the experiments upon the properties of the Calabar bean as recently described in nearly all the leading journals of medicine.

A few remarks upon the status of ophthalmic literature in America, may not be inappropriate. Comparatively few works of merit, on diseases of the eye, have been written in this country. Nearly all our books are simply reprints of English works, which are now in many respects much behind the advance of science. Probably it is not too much to affirm that in the English language, there does not exist a complete and desirable text-book on diseases of the eye. It is true, the works of Mackenzie, Lawrence and others, embracing valuable monographs, furnish the student with a vast amount of practical knowledge of many ophthalmic diseases. But they are not what the profession now demands—a complete work, corresponding, for instance, to that of Stellwag, of Vienna, with a systematic arrangement of the diseases of each tissue, with its anatomy and physiology carefully and clearly discussed, as also the pathology of each abnormal process, followed by a description of the most approved treatment. There are in our country those who, with their own extensive experience, and with their study of the works of Graefe, Donders, Wells, Jaeger, in fact, of all eminent writers in every language, are able to contribute such a work to our literature. It will require immense labor, but it is to be hoped some one will soon commence it.

The *American Journal of Ophthalmology*, edited by Dr.

Homberger, merits your support, and will most amply repay members of our profession for its perusal.

The attention of the Society is this year again called to the condition of the Chicago Charitable Eye and Ear Infirmary. This institution has now entered upon the seventh year of its existence, during which, 1682 patients have been treated; 1272 with diseases of the eye, and 410 with diseases of the ear. The association consists of a board of twelve trustees, and a Board of two consulting and two attending surgeons. The operations of the Infirmary have thus far been much limited from want of means, which have been sufficient, merely to furnish poor patients with treatment at its Dispensary. The good which has even thus been accomplished, is almost incalculable. Not unfrequently, however, patients have suffered from want of suitable diet and care, and of protection from exposure. It must certainly be a matter of interest to this Society, and to the profession generally, to learn that the Infirmary has been placed in a position in which its usefulness, as is hoped, will be widely extended.

The President of the Board of Trustees, Walter L. Newberry, Esq., has donated the lease of a valuable lot of land to the Infirmary for the term of ten years. A good and commodious building has already been secured for a hospital, and efforts are now being made by private subscriptions to furnish it in such a manner as will be comfortable to patients and creditable to the city. It must be understood that this charity, at present, consists in providing the poor with comfortable apartments and treatment for diseases of the eye or ear, gratuitously. A small sum per week, hereafter to be determined, will be required for board, since the funds of the Infirmary are not sufficient to furnish this last to patients gratuitously. Efforts will be made in due time to secure a fund for this purpose also. Will not the profession lend this Institution the support and encouragement it merits?

At the last meeting of the Board of Trustees the following resolution was passed: That students of medicine be admitted

to the Infirmary, with the privilege of studying diseases of the eye and ear, under such rules as the surgeons may, from time to time, deem best.

RAMBLES IN MILITARY HOSPITALS.

REPORT OF

A CASE OF ENCYSTED ABSCESS OF THE BRAIN.

By R. M. LACKEY, M. D., A. A. Surg., U. S. A.

James E. Stephenson, prisoner of war, aged 22 years, sanguine temperament, and apparently of good constitution, was attacked with small-pox, Jan. 12th, 1864. He had the distinct form of the disease, and so light that he remained only ten days at the Pest Hospital. Immediately after his return to barracks from small-pox hospital, Jan. 22d, he began complaining of constant and severe pain in the right supra-orbital and temporal regions, attended with some febrile action during the first few days. Nothing serious was suspected by the surgeon under whose care he was, and he was allowed to remain in barracks until March 22d, when he was sent to hospital. At the time of admission he still had the constant pain in the regions named, very slow pulse, 40 to 50, cool skin, bowels constipated, and but little appetite.

Various kinds of treatment were employed, but without affording permanent relief. He was kept upon tonics, however, and occasionally an anodyne was given hypodermically. Subsequent to his admission to hospital, he had a discharge of matter from the ear, that continued two or three weeks when it ceased. His mental faculties became gradually obtuse, and he remained on his cot nearly all the time, with his eyes closed as if asleep; but he could be easily aroused, and would say that he had not been asleep, and would answer questions and talk slowly but correctly. He contended all the time that

there was "some round substance inside of his head" that would roll around and change position as he turned his head from one side to the other, and so painful was this sensation, that he would sometime remain for hours without moving his head from the pillow.

About the 3d of April, a fluctuating tumor appeared behind the ear, which was opened, and pus discharged for several days. After this abscess was opened the patient was much relieved, became more lively, walked around the ward, and conversed freely with the attendants, and seemed in a fair way to recover. As soon, however, as the pus ceased discharging, the pain and other symptoms gradually appeared again, and grew worse until May 1st, when he was taken with convulsions, which increased in severity and frequency, and he died on the 3d.

There was no paralysis, or abnormal condition of the pupils of the eyes, up to the time he was seized with convulsions, but after the first paroxysm, the pupil of the *right* eye was dilated —and paralysis, such as to render articulation and deglutition difficult. During the interval between the paroxysms he remained comatose, and it was with difficulty that he could be aroused sufficiently to answer questions.

Post-mortem examination was made 12 hours after death. Drs. Morrison, Nesbit, and others were present. The brain was the only part examined. No abnormal appearance was presented on removing the calvarium, and the dura mater from the upper surface of the cerebrum. While removing the brain, and on making slight pressure on the right middle lobe, a large quantity of greenish looking pus gushed out. The organ was removed entire, and on examination an opening, from which the pus escaped, was found in the middle lobe on the right side, at that portion corresponding to a point on the skull where the anterior surface of the petrous joins the squamous portion of the temporal bone—immediately behind the base of the zygomatic process. Portions of the brain were sliced off, and the right middle lobe was found to be nearly all

destroyed by the abscess; the pus was contained in a cyst that was so thick and strong that I had no difficulty in separating it from the surrounding substance, and preserving it without any break, except the opening from which the pus escaped whilst removing the brain. This cyst will hold about four ounces of fluid. The substance of the brain surrounding the cyst was not in the least softened, and seemed to be entirely healthy. The ventricles were nearly full of a dirty looking fluid. The other parts of the organ presented, to the naked eye, nothing abnormal.

On examining the skull at the point designated above, an oval opening was discovered in the bone and dura mater, one-half inch in diameter. A portion of the skull, including the diseased part, was removed and preserved. The bone immediately around the opening is not much carious—indeed, there is so little appearance of disease that one would almost think the hole had been made with a drill.

This, then, seems to have been a case of *encysted abscess of the brain*, communicating externally through the opening in the bone and dura mater; and the matter producing the abscess behind the ear, was undoubtedly formed internally. The fluctuating tumor behind the ear appeared suddenly, and on opening it, the pus found to be beneath the periosteum, which on examination after death was found separated from the bone at that point. The escape of pus from the abscess in the brain, was stopped by the closure of the opening in the bone, produced by the thickening of the tissues externally, which was also proven to be the case by post-mortem examination.

This man had never, as we could learn, had any injury of the head sufficient to produce the disease, and he had never complained of pain in the head before having small-pox. He had never had syphilis, and had no indications of scrofulous diathesis.

Rock Island Barracks, Ill., May 20th, 1864.

A CASE OF METROPOLYPUS.

By D. B. TRIMBLE, M. D.

Editors of Chicago Medical Journal—Gentlemen:

Though there is nothing extraordinary in the following case, or probably in its treatment, yet a record of the successful management of any severe case of disease, where the remedies resorted to are evidently beneficial, may be instructive to the younger, perhaps encouraging to the more experienced, practitioner; and I therefore, venture to send for publication, if you think it worthy of a place in your journal, the following case of Metropolypus:

Miss ———, a lady about 40 years of age, of very delicate health, and who had previously been under my care for several years, for various affections, called to consult me for a tumor in the vagina which caused her much uneasiness. She had been affected with uterine hæmorrhage, at intervals, for some months; retention, of urine, often requiring the use of the catheter; and pain in the loins. A few years previous to this period she lost a near relative with cancer of the womb, and was impressed with the belief that she was similarly affected, as she complained of a feeling of weight and fulness in the pelvis, and was confident of the presence of a tumor. Her nervous system was in an exceedingly excited condition, and had been so for some years—being subject to such severe neuralgic pains as to throw her into violent spasms. One of the seats of pain was at the symphisis pubis, the frequency and severity of which was latterly much increased.

On examination I found a tumor about three inches in length by one and a half inches in diameter, of a firm consistence, and insensible to the touch. The tumor would sometimes recede more than half its length, and, when the patient was

recumbent, would nearly disappear. I had no doubt of it being a polypus, of the fibrous variety, and so informed her, and also of the necessity of an operation. This she was willing to endure, and requested me to perform it, but never having had a similar case, I preferred having a more experienced operator, and sent for an eminent surgeon from Philadelphia. In the meantime, to prevent it from receding, I tied a ligature of very narrow tape as high up on the tumor as possible, and secured it to her garter.

The operation was performed two days after (while under the influence of ether), with Gooch's canula, and the wire applied external to the os tincæ. In about 80 hours I removed the canula with the tumor. The odor was intolerable for several days, and there continued to be a semi-sanguineous discharge for about two weeks. The patient continued to feel pain in the loins and pelvic region for several weeks, which gradually subsided. From the size and shape of the tumor (its diameter being nearly alike throughout its length), from the quantity and quality of the discharge, and from the continued suffering, I felt convinced that the tumor had not all been extirpated, and expected that, in time, the operation, which was performed in July, 1862, would have to be repeated.

In September following, she informed me that she felt confident that the tumor was re-forming, but she was able to keep about until the following April, when she sent for me, and upon making a vaginal examination I found a tumor nearly filling the vagina, more fleshy than the last, and somewhat pyriform. No pedicle could be felt, however, but at the os uteri, which firmly compressed it; its diameter was about an inch Being a lady of intelligence I explained to her, and the friend who nursed his, that the tumor had not descended sufficiently to make an operation effect a radical cure; that it was necessary, to accomplish this, to ligate the neck of the polypus, to perform which, the os uteri must be dilated to allow of the further transmission of the tumor; that the womb itself must, if possible, be made to expel it, and that, for this pur-

pose, I would be obliged for a time, probably for some days, to place her under the influence of suitable medicines.

Viewing the uterus as in a condition analogous to that in the puerperal state, and that its fibres might be made to contract, I administered ergot in moderate and repeated doses, which, in less than twenty-four hours, produced considerable pain. As the os tincæ was still rigid I covered it with the ext. belladona, and at my next visit found the os was somewhat relaxed and the tumor lower. Continued the treatment, but on the third day, owing to the earnest entreaties of the patient, I consented to operate, though the stem of the polypus was still within the os. This, however, must have been near, from its diminished diameter. I had procured a long Gooch's canula, and Museux's forceps, and after bringing her fully under the influence of ether, I passed the canula nearly an inch within the os uteri, (it being dilated and dilatable,) and applied the ligature with very little difficulty. On the fifth day I made (as I had done for the two previous days) some traction on the canula with a view to removing it, but it adhered too firmly to enable me to do so. I then applied the forceps and used as much force as I thought proper, but without success. About an hour after I left, however, she got out of bed when the whole mass, with the instrument, came away, its weight breaking the slight attachment which had prevented me from removing it. I had no means at hand to weigh it, but it measured seven and a half inches in circumference and four in length. There was but little discharge subsequently, and much less fetor than in the previous operation, and which disappeared in a few days and did not return. Though I was not satisfied that I had grasped the neck of the tumor by the wire, yet I felt that it was in all probability a radical cure; up to April 6th, 1864, there has been no appreciable return of the disease.

The points of interest in this case are, that in the first operation, it was performed too soon and without sufficient preparation, so that a portion of the tumor was left; and in the

second, that the contractile efforts of the womb can be excited even in its unimpregnated state, sufficient for useful practical purposes. How far the belladonna was useful in dilating the os it is difficult to determine, for slight contractile efforts, but no dilation, had commenced before its application. I think it had an influence, and at any rate can do no injury. The severe pains that this patient suffered can not, in any great degree, be attributed to the polypus, for, as before observed, she had been a sufferer from various causes for a number of years. But the acute neuralgic pain in the symphisis pubis was, if not caused, much aggravated by it, for since the last operation, she has suffered comparatively little in this region.

When the disease has advanced to the degree that affected my patient, there is of course no means of relief except chirurgical, but the question arises, can the causes of the disease be counteracted and its production prevented?

From the secluded condition of the parts affected; from the absence of pain, at least until the tumor attained such a size as to prevent the possibility of a medical cure; and from our want of knowledge of the condition of the system predisposing to the disease, it is very difficult to discover it in time to administer the proper remedies—did we know them. The question presents, must the system be in a sthenic or asthenic condition to produce polypii? It is evident that our therapeutics will depend upon our decision. In my patient, though she was much emaciated, there was no approach to anæmia, or to an asthenic condition; and from a case reported by Dr. Ramsbotham; and others that have been reported, I arrive at the conclusion that the uterus is in a hypertrophic or sthenic state when polypi are produced. An asthenic system could not eliminate such immense morbid growths as we read of or witness. In Dr. Ramsbotham's case the patient, who was in labor, had a polypus projecting from the uterus, "as large as a goose's egg," and which was forced from the vagina by the parturient throes of the womb forcing the child's head against it. The woman having been delivered, it became a question,

what should be done with the polypus? In consultation with his father, they declined removing it for the following, among other reasons, "Again, it seemed likely that, as the adventitious growth was nourished by the same vessels that supplied the uterus, these vessels had become enlarged in proportion somewhat equivalent to the increase in the calibre of the uterine vessels themselves. If such were the case, it was fair to infer that, as the uterine vessels shrunk after delivery, the vascularity of the polypus would also be materially diminished; and that this diminution in the bulk of the morbid growth would render its removal altogether less formidable."

We can have no doubt that the uterus is in an exalted or sthenic condition, when in the gravid state, and the ratiocination of the Drs. Ramsbotham was certainly correct. The result of the case fully justified this opinion, for he says, "After the lapse of nearly four months, no symptoms appearing in the meantime to call for earlier inteference, the polypus was tied in the usual manner, and sloughed off in five days; and at the time of its removal its size was scarcely so great as a walnut divested of its outer husk." This rapid reduction in the size of the tumor shows that as the active condition of the womb abated, the exciting cause of the polypus was lessened; affording another proof that the sthenic state of the organ was essential to the rapid development of the tumor.

The greatest difficulty in these cases is that of diagnosing them in the earlier stages, as there is then so little derangement of the general system, or at least it is so indefinitely known, that the symptoms are uncertain. But if there are sufficient reasons to suspect the existence of a case, or if it is in parts where it can be early ascertained, as in the vagina, urethra, or nares, remedial treatment may avail. In this event probably a moderate anti-phlogistic course, low diet, antimonials, etc., in connection with the iodides, bromides, etc., might be successful. Dr. Stewart, of Peekskill, N. Y., records a case of large "ovarian tumor," which was treated with bromide of potassium with very great alleviation, and the general

effect of these remedies would seem to indicate their usefulness in this disease. Where there is great prostration or anæmia produced by hemorrhage, the reducing plan would, of course, be contra-indicated, and tonics, stimulants, and nourishing diet should be administered to give tone to the system, and local applications made to check hemorrhage.

But I am much inclined to the opinion of Professor Meigs, that medicines are of but little avail in the treatment of polypi. "If this view of the case be just," he says, "it would be idle to attempt to modify or control the growth of such a tumor, by means of drugs or medicines administered internally, since, however powerfully such drugs or medicines might be able to modify the actions of the woman's constitution under its natural physiological laws, they could not reach in their influence, nor in any degree control the accretion forces employed in the production of polypus, which, being heterologue, will not, neither, indeed, can come under obedience to the physiological law of the woman's life; a law with which it has no longer any lot or part, beyond that of living as long as she lives, preying as a parasite upon her materials, and sending back no answering organic influences to serve in maintaining that beautiful harmony of the organisms whose concert of action is life. Such a growth is not a part or parcel of the economy, it is not like one of the members of a family or a flock, but like a stranger, or a thief and a robber, that has entered in by guile or violence, to dwell among them, and to disturb and destroy them. Hence you see that such tumors are to be treated chirurgically and not medically. They may be extirpated, they can not be cured. Save yourselves and your patients, therefore, the trouble and loss of using physic or drugs."

REMOVAL OF
A FIBRO-CELLULAR TUMOR OF THE SCROTUM.

By A. J. BAXTER, M. D., of Chicago.

The rarity of fibro-cellular tumors, properly so-called, in comparison with outgrowths of the same texture; and the very early age at which the one about to be described, occurred have induced me to give it publicity.

Notwithstanding the extensive observations of Mr. Paget, he has seen but two specimens of the variety of tumor under consideration, in the scrotum—both of which occurred in subjects above seventy years of age.

Charles Vanduren, a Swede, aged 13, delicate, of a sympathetic temperament, consulted me, May 2d, in regard to a "lump in his bag." Upon examination I found a tumor situated in the right side of the scrotum, slightly pendulous, which was first noticed about three years since. In volume it was larger than two fists, slightly lobulated, of an elastic feel, though of equal density, and conveying the idea of cysts. Several enlarged veins ramified over its cutaneous surface, skin healthy in appearance and density, freely movable over the subjacent parts, though the *tumor* seemed to be firmly fixed, deep in the perineum, which was found to be the case during the operation for its removal.

The patient did not pay much attention to it during the first two years, as it was not larger than an English walnut, and has never been a source of pain; but during the last year it grew very rapidly, and continued to do so up to the time of extirpation. No enlargement of the inguinal glands.

The patient being chloroformed, the operation was commenced by making an incision from near the root of the penis and on the right of the raphe, to the perineum, which freely exposed the tumor contained in a loose capsule. The testicle

was pushed high up, the tunica vaginalis testis was distended with a transparent fluid, and adherent to the tumor. No trouble was encountered in its removal, the adhesions to the tunica vaginalis were readily broken up by the handle of the scalpel. One artery, probably as large as the radial, passed into the posterior or perineal portion of the tumor, which was felt and ligated before being divided. The weight of the tumor a couple of hours after removal was three-quarters of a pound. A portion of the tumor was examined under the microscope, and so fully coincided with the description given by Mr. Paget, that I beg leave to refer to his article on the subject. The patient is now fully recovered.

PAPER ON CEREBRO-SPINAL MENINGITIS.

READ BEFORE THE ILLINOIS STATE MEDICAL SOCIETY AT ITS ANNUAL MEETING IN MAY, 1864.

By R. E. McVEY, M. D., Waverly, Ills.

Mr. President and Gentlemen :—

The subject of cerebro-spinal meningitis has engaged the attention of the Profession for the last fifteen months. Certain portions of our country have suffered from an epidemic bearing the name referred to above. However, I think the name not very appropriate, as some of the patients die before inflammation could take place. Inflammation may follow as a secondary symptom, but the most prominent features of this disease at the commencement, are those of congestion and depression indicating the presence of some toxic agent in the circulating fluid, and that agent seems to have a very strong affinity for the brain, destroying the blood, and overcoming the contractile power of the capillaries and vessels of the brain. Consequently the circulation in the brain is interrupted, the capillaries and the coats of the vessels in the brain expand to accommodate the accumulation of fluid in their structure,

which is evidenced by the epistaxis that follow in some of the cases that recover. I have seen patients die within six hours after they were taken with coma and prostration; the circulation giving out first, and intelection next, and lastly respiration, without any febrile reaction whatever, but in the majority of the cases reaction does take place in about six hours after the attack, and when reaction does take place, there is intense febrile excitement, with great restlessness and moaning. The eyes are suffused and the pupils are dilated. The patient is troubled with delirium, when aroused, for the most part answers questions correctly. Sometimes there are tremors of the whole body, one passing in succession after another, but more frequently but one side is affected. Sometimes there is squinting of one eye; the countenance has a brown hue; the tongue is slightly coated at the start, but as the disease progresses it becomes thicker; the bowels are constipated; the patient vomits a dark, grumous substance; the posterior cervical muscles contract, and draw the head backwards. Sometimes there is petechiæ over the neck, breast and extremities.

In regard to treatment, the most successful I have met with has been cerebral and arterial stimulants, with arsenic as an antiperiodic. It is of the utmost importance to arouse the capillaries and vessels of the brain, in order that they may relieve themselves of the fluid accumulated in their structures, and I know of no better agent than opium to do it with. Under the foregoing treatment I have had six patients recover and three die, and my partner, Dr. Brown, says he has treated, in the last six months, 21 cases, five of which were fatal, and sixteen recovered.

If the symptoms are severe, viz., coma, muscular contraction, with pain in the limbs, back and head, I have given opium in large doses, say, to an adult from ¼ to 5 grs. Alcohol freely; usually Fowler's solution, from 6 to 8 gtts. every four hours, and when the muscular contraction continued for a considerable length of time, strychnia. Alteratives moderately, keeping the bowels open with mild aperients, invaria-

bly applying friction to the surface; tinct. capsicum and alcohol freely, with turpentine to the spine; sometimes blisters to the neck. Convalescence is generally slow.

Quinia I think, is contra-indicated, unless it is in very small doses, for the reason that it increases the agitation and produces a certain amount of deafness, with high delirium. Probably after the violence of the disease has passed off, it may be given with impunity, but not until the tremors have subsided and the brain so relieved that there is no danger of producing congestion of the eyes and ears. After this time it may have a salutary effect upon the digestive organs, and by giving tenacity to the system in general.

CEREBRO-SPINAL MENINGITIS.

By M. M. EATON. M. D., of Peoria, Ills.

It seems to be a fact that during the past year or 18 months, various parts of Illinois have been visited by an epidemic heretofore unknown experimentally in the West. The disease (to the best of my information,) first appeared near Galesburg, about 18 months since, and so fatal was it, that for a time the patients were supposed to have been poisoned.

In this vicinity it appeared about six months since, and now is upon the increase, though not so fatal as at first. I have interested myself very much in the disease, and have seen and corresponded with physicians upon it, from nearly all parts of the State. The symptoms vary somewhat, as in all other diseases, in different cases. My own experience is confined to 13 cases, several of which I have taken some of our oldest physicians to see. They have generally been attacked suddenly, without premonition, with a chill or a shivering; the countenance is shrunken and cadaverous; emesis soon sets in; delirium of a frightful type immediately follows; the pulse is rapid and weak; the pupil is for the most part dilated, with

alternate contractions, and is frequently insensible to light; the bowels soon becomes tympanitic; the head is drawn back and great pain is complained of in some part or member, generally in one side of the head. Every movement of the body seems to give pain; the bowels are constipated; urine scanty and strangury is sometimes present; the temperature of the body is below the natural standard; the tongue bloodless; purple spots come and go on various parts of the body, in the outset in some cases, in others not till near death.

My cases have all been children from three to twelve years of age, save one case, a lady with two children. Other medical men in this city, however, have had adult males who were attaked with these symptoms and died. As to the causes I am ignorant. It has seemed to be infectious in some cases, attacking those who were much together. I have made but one autopsy. In this case the eyes were sunken; the membranes of the brain were intensely congested; there was effusion of lymph in the arachnoid; the mucous membrane of the stomach was softened and disorganized; other organs healthy.

I am informed by physicians from some dozen localities over the State, that their cases have been almost uniformly fatal when presenting the symptoms above enumerated. My own practice has been more favored, and for this cause I for a time felt uncertain that my cases were really of the same character as those who were proving so fatal with other practitioners, but am now certain that my cases were genuine attacks, and of the severest type. The first case I had died in 48 hours, without my being able to aid his recovery in the least. I then began my opium treatment, and since then have lost but three out of twelve cases, and to each of those that died I was called from 24 to 30 hours after delirium had set in, when I have no idea that anything can save them, when they have a genuine attack and have had no rational treatment before.

The treatment I have adopted (and I may say has been concurred in and adopted by the Medical Society of this city now, after having battled me some at first for using it,) is this, viz.,

to give opium as the sheet anchor in the first instance, as soon as called, if delirium has set in, and the pupil is dilated. Repeat the opium in doses according to the age of the patient, giving an adult 5 grs. to a dose every half hour or hour, until the patient falls into a good sound sleep, which in my adult case took about 40 grs. But no matter how much, look to the effect and not at the dose; allow the patient to sleep four or six hours, then give opii pulv., gr. ij; hydg. chlo. mit., gr. ss, every four hours, and immediately give tonics, tr. ferri chlo., small doses of sulph. quinia, brandy, beef tea, etc.

As soon as sleep is produced emesis ceases, and when the patient awakes he is generally rational, if not, continue the opium till he has another good sleep. He will then (i.e., after becoming rational,) be so weak he can hardly turn in bed; now give the tonics; keep the room still, slight noises annoy the patient exceedingly, and sometimes produce a relapse.

Dr. Murphy has used venesection in connection with the opium, in one case with good success, which, by the way, I consider good practice in some adult cases. I have used blisters to the back of the neck, and both anodyne and stimulating washes and liniments to the spine, without any perceptible benefit. The disease, methinks, is of course congestive in the beginning, affecting the membranes of the brain and spine, and primarily the arachnoid. Dr. Condie's article, in "Watson's Practice," on cerebro-spinal meningitis, is the best modern description of the disease that I have seen. In Copland's Dictionary of Prac. Med. I find a tolerably correct description of the disease, though less violent in the symptoms as a rule, than has been the epidemic from which we have been suffering. I learn from this work that the disease was first known in America in Medway, Mass., in 1806, and prevailed in the Eastern and Middle States, from that time to 1815. It prevailed all over Europe in 1505; also in 1528 and 1574; each of which times it was followed by the Plague. It occurred in Egypt in 1760, and in Switzerland in 1805. It has been every time confounded with other diseases, and probably many cures

reported where the disease did not exist at all. I feel sad that we know so little of the disease as we do, as I believe every physician should be prepared to know it when he sees it, and strike hard blows in the outset, for it seems that after 24 hours the system is so prostrate that it is impossible to rally it again to normal action.

SELECTED.

[We publish the following at the reqnest of a number of the junior members of the profession among our subscribers. —Eds.]

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

Art. I.—*Duties of Physicians to their Patients.*

§ 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. Those obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect, and confidence.

§ 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity.

Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secresy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secresy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance, should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secresy by courts of justice.

§ 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change that may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

§ 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquility of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient, and to depress his spirits.

§ 5. A physician ought not to abandon a patient because

the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

§ 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

§ 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. II.—*Obligations of Patients to their Physicians.*

§ 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

§ 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation, do mankind rely on the skill of an untaught artist, and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

§ 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family as much as possible, to one physician; for a medical man, who has become acquainted with the peculiarities of constitutions, habits, and predispositions, of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

§ 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he should always bear in mind that a medical man is under the strongest obligations of secresy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

§ 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business, nor the history of his family concerns.

§ 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness, to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses, who are so frequently met with, and who pretend to possess infallible remedies for the cure of

every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

§ 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

§ 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

§ 9. Patients should always, when practicable, send for the physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

§ 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the Support of Professional Character.*

§ 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly

such laws as are instituted for the government of its members; —should avoid all contumelious and sarcastic remarks relative to the faculty, as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

§ 2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he can not command their respect and confidence, and to both because no scientific attainments can compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

§ 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases--publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

§ 4. Equally derogatory to professional character is it, for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and, if mystery alone give it value and importance such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

ART. II.—*Professional Services of Physicians to each other.*

§ 1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety an solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined, for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

ART. III.—*Of the duties of Physicians as respects vicarious offices.*

§ 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he can not be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy without awarding to the physician who officiates the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of Physicians as regards Consultations.*

§ 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

§ 2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

§ 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered, which are not the result of previous deliberation and concurrence.

§ 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation

and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made at the next consultation.

§ 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion *in writing*, and *under seal*, to be delivered to his associate.

§ 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

§ 7. All discussions in consultation should be held as secret and confidential. Neither by words or manner should any of the parties to a consultation assert or insinuate, that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

§ 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians can not agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dic-

tates of judgment. But, in the event of occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstance prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confine. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any farther deliberation in the consultation, or participation in the management of the case.

§ 9. As circumstances sometimes occur to render a *special consultation* desirable when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited attendance. As such consultations require an extraordinary portion both of time and attention, at least a double honorarium may reasonably be expected.

§ 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practiced by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of Physicians in cases of Interference.*

§ 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

§ 2. A physician in his intercourse with a patient under the care of another practitioner, should observe the strictest reserve and caution. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

§ 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of

another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topic of conversation should be as foreign to the case as circumstances will admit.

§ 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances, no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

§ 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

§ 6. It often happens, in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present, any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his farther attendance be requested, should resign the case to the latter on his arrival.

§ 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "Patient of another Practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home, of the latter, or who may

have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

§ 8. A physician when visiting a sick person in the country may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

§ 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional brethren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed which might justly be claimed.

§ 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of Differences between Physicians.*

§ 1. Diversity of opinion and opposition of interest, may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and can not be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians, or a *court-medical.*

§ 2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which can not be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of Pecuniary Acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the Profession to the Public.*

§ 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions—in relation to the medical police of towns, as drainage, ventilation, etc.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

§ 2. Medical men should be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests, and courts of justice, on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make *post-mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

§ 3. There is no profession, by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limit should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as

presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives, or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform military duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

§ 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries sustained by the unwary from the devices and pretensions of artful empirics and imposters. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the Public to Physicians.*

§ 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

EDITORIAL AND MISCELLANEOUS.

The American Medical Association.—The 15th Annual Meeting of this organization convened in the city of New York on the 7th of June, and remained in session three days. The attendance was good. It was a pleasant social gathering, and doubtless to those who were there it was a period of needed relaxation from the toilsome routine of the physician's life—but the record of the daily business of the meeting is devoid of interest, and of the value of the communications made through the different sections, a judgment can only be formed when the transactions are in print. The published transactions of the Association do not seem to be so generally circulated as we should think they would be, for we are told by Dr. Wistar, the treasurer, that though the Association numbers above 3,000 members, only 120 copies of the transactions of the 14th Annual Meeting have been disposed of during the past year.

Under the heading of "Hints to Reform," the *American Medical Times* has an article relating to the Association, that is well calculated to excite reflection, and from which we quote as much as we have space:

"During the late session of the National Medical Convention the inquiry was not unfrequently made by the older members—"How can we give more character to the Association and render its meetings more interesting and profitable?" This is, indeed, a most important question, and one that every member who has the welfare of the Association at heart should seriously consider. We have stated that the late meeting was a decided success, and such we must regard it when considered as a pleasant and national reunion of the profession. But when viewed from a higher stand-point, and with a more critical regard to those elements which are to render this body the controlling power in the profession, elevating its moral, social, and educational status, the Association failed to answer

the just expectation of its friends. The precious hours of its general sessions were too much occupied with loose discussions of unimportant subjects; while windy, pretentious orators who always float to the surface on such occasions, interrupted the progress of business by points of order, motions, and trivial questions. The sections failed of that degree of interest which they should elicit, owing to the absence of well-prepared papers and searching discussions by members eminent in the department of practice to which such papers belong. But these defects, and others that might be noticed, are not inherent in the Association, and may be corrected if the leading members will take a decided stand in favor of reform. We propose thus early to present this question to the profession, by offering some suggestions, in order to elicit a full and free discussion while the impressions made by the late meeting are still fresh in the minds of members.

The Association has properly a two-fold character; it is both an ethical and a scientific body, and it is very important to maintain these features in full strength and harmony. But there is danger of its losing both, and gradually sinking into hopeless imbecility. It is essential to the integrity and good government of the profession that there be some great central organization to which it may refer all questions disturbing its relations or affecting its general welfare. It is not less important that we have a great central scientific body which shall be the patron of the medical sciences, and shall stand before the world as the representative of our national medical literature. To both of these positions the Association may attain if discreetly managed.

"To become the ethical or governing body of the profession one thing above all others is requisite, viz., that the Association command the respect of the profession. It can not be the arbiter of medical opinion, nor the instructor in morals and professional amenities, without itself being above reproach. And as a corrupt body can never be purer and better than the individual members, the Association must, if it would place itself upon the highest ground, purge itself of those blighting excrescences which cling to it as to their last and only hope of respectability. In other words, the Association must have a more select representation. At present medical societies exercise too little discretion in the selection of delegates; the position is given to any one who volunteers to attend, and such volunteer is generally the "wind bag" of the Society. The Association should limit its representation to State, Coun-

ty, and well established, legally incorporated bodies, and exclude those ephemeral voluntary organizations which too often exist only to enable some objectionable person to gain a membership. It would do well to establish a title of membership; and, placing a high qualification upon it, subject its list of permanent members to a searching revision. Names stand recorded on that roll which are no longer worthy of such associations. If by such or any other means the representatives of the profession could be more select, embracing only the better class, the meetings of the Association would be dignified, its discussions deliberate, and its decisions would command respect."

The officers for the ensuing year are

President—N. S. Davis, of Illinois.

Vice Presidents—W. S. Mussey, of Ohio; Worthington Hooker, of Conn.; Wm. Wheelin, of Ind.; F. E. B. Heintze, of Maryland.

Permanent Secretary—Wm. B. Atkinson, of Penn.

Assistant Secretary—H. R. Storer, of Mass.

Treasurer—Casper Wistar, of Penn.

Prize Essay by S. Fleet Speir, on the Pathology of Jaundice. The next annual meeting will be held in Boston.

The Growth of Bone.—M. DeLamballe, in his researches on the generation and reproduction of tissues, corroborates the assertions of M. Flourens. 1st. That bones increase in thickness by external and superimposed layers. 2d. That they increase in length by the addition of terminal layers arranged in juxtaposition. 3d. That proportionately as the new layers are deposited externally, the older ones on the inner surface are re-absorbed. 4th. That ossification consists in the regular and successive conversion of periosteum into cartilage, and cartilage into bone.

Hydrophobia in Dogs.—M. Leblac has revived the old theory that "restraint from sexual intercourse" is a potent cause of hydrophobia in the dog. In support of which, he says, "On one side of a portion of the Danube the Christians

have none but male dogs, whereas on the other side the Turks leave the animals of both sexes in a state of absolute freedom. On the Christian side hydrophobia is frequent. On the other, unknown." It ought to be unknown in this country.

Tetanus in the Army.—Tetanus is prevailing among the wounded of the Army of the Potomac to an unusual extent, nearly every case proving rapidly fatal. Dr. E. Brown-Sequard, we are glad to learn, has consented to give a few lectures on this disease, at Washington, where it is most prevalent.

Most of the Medical Journals have, or intend advancing their price of subscription.

Two Deaths from Laughing Gas.—A short time since a merchant of Philadelphia, Mr. Sears, died from the effects of laughing gas, administered for the painless extraction of a tooth. A traveling dentist, at a public exhibition of laughing gas, at Swanton Falls, Vt., administered this gas to several persons. Among the number was a beautiful girl, seventeen years of age, the daughter of W. H. Bell, a highly respectable citizen. The day after inhaling the gas she was taken ill, and died the following day from its effects.

Arsenic in Pemphigus.—Mr. Hutchinson, of the Metropolitan Free Hospital, speaks very highly of the use of arsenic in pemphigus. He says that "it renders relapses less likely, and that an improvement may be noticed immediately on its employment, not a single fresh bulla showing itself after the first few days of treatment.

Prolongation of Anœsthesia by Chloroform.—Drs. Erlenmeyer and Nussbaum state that by subcutaneous injection of one-eighth grain doses of sulph. morphiæ the anæsthesia produced by chloroform may be protracted without danger, the

patient passing at once into a sound sleep of several hours' duration. It is an experiment well worthy of trial in protracted operations, and can be easily performed with one of Ames' needle pointed syringes.

Garibaldi in England.—One of the principal reasons for Garibaldi visiting England was to place himself under the care of Mr. Fergnson, of London. His general condition is declared to be excellent.

Sulphur in Asthma.—M. Ducles, of Tours, recommends this substance in doses of three fourths to one and a half grs. three times a day for several months. The Boston *Med. and Surg. Journal* mentions three severe cases where asthma was completely cured by this very simple treatment.

Agreeable Mode of Taking Senna.—Dr. Lithner (Buckner's Reportorium,) says that senna leaves (one or two drachms to one or two cups of water,) should be allowed to infuse all night in cold water. With the strained infusion coffee is prepared next morning as if with water, and an aperient which does not taste of senna, and does not cause griping, is thus produced.

Collodium for the Stings of Wasps.—Dr. Munde, in the *Lancet*, states that a coating of collodium applied to the part injured causes the pain to disappear and the swelling to rapidly subside.

Pennsylvania Hospital.—Dr. James Pancoast has resigned his situation as one of the surgeons of this institution, and Dr. Thomas George Martin has been selected in his place.

Saracenia Purpurea.—Dr. James Watson has experimented in eight cases of small pox, in the Royal Infirmary, with this newly vaunted Canadian remedy for small pox, and found it absolutely inert.

Honey as an Excipient for Pills.—M. Thibault (*Bulletin de Thérapeutique,*) believes that much of the disappointment following the employment of pills arises from their, as ordinarily prepared, acquiring a degree of induration that prevents their solution, and enables them to traverse the alimentary canal unchanged. To prevent this he recommends the employment of honey, as pills prepared with it always remain soft, however long they may be kept.

The Iodide of Lime as a substitute for Iodide of Potassium is rapidly gaining favor among distinguished London physicians. It is used in those cases where Iodide of Potassium is indicated, with more marked effects than usually attend the use of that salt. The lime and iodine are held together by a very feeble affinity, and the salt will not admit of exposure without evolving free iodine. The solution is a colorless and almost tasteless liquid, and remains permanent, although long kept and exposed to the air.

Each drachm of the salt contains eight and a half grains of iodine. The Iodide of Lime is superior to Iodide of Potassium in several particulars, as, 1st. The smallness of the dose, and the minute state of its atomic division. 2d. In not passing off so quickly through the kidneys. 3d. In its ready combination with the blood and tissues, manifested by its alterative effects. 4th. In being nearly tasteless, and therefore more readily taken, especially by children. 5th. In being twenty times less expensive. 6th. In not producing either gastro-enteric or vesical irritation. The dose of the salt is about one-fourth of a grain, given in solution three times a day.

BOOK NOTICES AND REVIEWS.

Books and Pamphlets Received.—

The Principles and Practice of Obstetrics: Illustrated with One Hundred and Fifty-Nine Lithographic Figures from Original Photographs and with numerous Wood Cuts By Hugh L. Dodge, M. D., Emeritus Professor of Obstetrics and Diseases of Women and Children, in the University of Pennsylvania; lately one of the Physicians to the Lying in Department of the Pennsylvania Hospital; lately one of the Physicians to the Philadelphia Almshouse Hospital; Consulting Physician to the Philadelphia Dispensary; Fellow of the College of Physicians of Philadelphia; Member of the American Philosophical Society, etc., Author of a treatise on "The Peculiar Diseases of Women." Philadelphia: Blanchard & Lea. 1864. From S. C. Griggs & Co., No. 39 and 41 Lake street, Chicago.

The Pathology and Treatment of Venereal Diseases Including the Results of Recent Investigations upon the Subject By Freeman J. Bumstead, M. D., Lecturer on Venereal Diseases at the College of Physicians and Surgeons, New York; late Surgeon to St. Luke' Hospital; Surgeon to the New York Eye and Ear Infirmary. A New and Revised Edition, with Illustrations. Philadelphia: Blanchard & Lea—1864. From W B Keen, Chicago.

A Manual of the Practice of Medicine. By Thomas Hawkes Tanner, M. D., F. L. S., Member of the Royal College of Physician; Assistant Physician for the Diseases of Women and Children to King's College Hospital etc., etc. From the last London Edition, Enlarged and Improved. Philadelphia: Lindsay & Blakiston—1864. From S. C, Griggs & Co.

On Rheumatism, Rheumatic Gout, and Sciatica, their Pathology, Symptoms and Treatment. By Henry William Fuller, M. D., Cantab. Fellow of the Royal College of Physicians, London; Physician to St. George's Hospital, etc., etc. From the last London Edition. Philadelphia: Lindsay & Blakiston —1864. From S. C. Griggs & Co,

A Treatise on the Chronic Inflammation and Displacements of the Unimpregnated Uterus. By Wm. H. Byford, A. M M. D., Professor of Obstetrics, etc., etc., Chicago Medical College, Medical Department Lind University. Philadelphia: Lindsay & Blakiston—1864. From S C. Griggs & Co.

A Practical Treatise on the Sexual Organs of Women. By F W. Von Scanzoni. Translated from the French by Drs. H Dor and A. Socin, and Annotated, with the Approval of the Author, by Augustus K. Gardiner. A M. M. D. With upwards of Sixty Illustrations. R. M DeWitt, Publisher, 13 Frankfort street, New York. Through John R. Walsh, Chicago.

Transactions of the State Medical Society of Indiana, at he Fourteenth Annual Meeting, Held in the city of Indianapolis, May 17th and 18th, 1864.

Berkshire Medical College.

Faculty of Medicine,

HENRY H. CHILDS, M. D., *President.*

WM. WARREN GREENE, M. D., *Dean.*

HENRY H. CHILDS, M. D., Emeritus Prof. of the Theory and Practice o Medicine.

TIMOTHY CHILDS. M. D., Prof. of Military Surgery.

CORYDON L. FORD, M. D., Prof. of Anatomy and Physiology.

WILLIAM P. SEYMOUR, M. D., Prof. of Obstetrics and Diseases of Women and Childr n.

WM. WARREN GREENE, M. D., Prof. of Principles and Practice of Surgery and Clinical Surgery.

PAUL A. CHADBOURNE, M D, Prof of Chemistry and Natural History.

ALONZO B. PALMER, M D, Prof. of Pathology and Practice of Medicine.

PLINY EARLE, M D., Prof. of Materia Medica, Hygiene, and Psychological Medicine.

E. B. LYON, M. D., Demonstrator of Anatomy and Prosector of Surgery.

The Forty-second Annual Course of Lectures in this Institution will commence on Thursday, August 11th, 1864, and continue sixteen weeks.

Four weeks previous to the beginning of the *Regular Term*, Prof. Greene will give a course of instruction on Fractures and Dislocations, gratuitous to those who attend the Regular Course.

Fees.—For all the Courses, *payable in advance*, $50. Matriculation fee, $5. Graduation fee, $18. Dissection fee, $5. Library fee, $1.

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WM. WARREN GREENE, M. D.,

PITTSFIELD, Mass., May, 1864. 3t. *Dean of the Faculty.*

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OR

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ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON "CONGESTION."

By J. A. A.

"What is in a name?" Much—very much. Even life sometimes, when a physician uses it—for with him a name grows to be a "real thing,"—a power which influences and controls, when influence and control poise the nice balance of dangerous disease.

There is scarcely any other name, than this of CONGESTION, which is oftener used by physicians to patients and their friends, or which figures more ominously in Mortality Reports.

The word is a cloak for a multitude of organic sins. The word means, a massing together, a heaping up, a crowding—technically an extraordinary accumulation of blood in a part, with diminution, or total cessation, of its normal motion, "*Stasis of Blood.*" And this, we are told, may be active or passive. And some say that the phrase *active* congestion involves the idea of too much life, whilst the term *passive* recognizes that there is too little life. If this be true, this is a wonderful difference! Somebody says something about loss

of contractility, or irritability, or some other *ility* of the capillary parietes as though that meant anything!

In the light of modern science, all these words ending in *ility* are *voces et preterea nihil.* Some one says something about *tonicity*, or some other *icity*, as though that meant something. I pray you, my friend, get rid of the *icities* as well as the *ilities*, they are all shadows and nonsense!

When the great, or simple processes of nature are referred to *properties*, we sin with the alchemists of centuries ago, without the excuse of alchemists of centuries ago. The sin of that ignorance the God of Science winked at, but now commandeth —quite otherwise.

What do we mean by *Congestion?* To understand the stasis of blood—congestion—hyperæmia—or whatever we please to call it—be it "active," or "passive," or neuter, it is necessary to understand why the blood flows in arteries, capillaries, or veins, at all.

My Veratrum Viride friend says, it is because he has not administered his pet specific, and I am quite willing to admit that he not infrequently renders the flow impossible, by its administration. And so he of the Aconite, or Tartar Emetic, or Lobelia persuasion!

Somewhere about 1619, Anno Domini, Harvey demonstrated that the blood passed from the left ventricle of the heart to the aorta, and from that great tube to the arteries, thence to the capillaries, thence to the veins, and thence to the right auricle of the heart, the right ventricle, the lungs, the left auricle, and thence to the left ventricle, and so on again. The result was, the whole medical world began to believe, and much of it still believes, that in the heart are the "issues of life," and in it the fountains of disease. And much of medical practice has been based on controlling this muscular viscus.

Hence the Veratrum Viride man, and the Aconite man, and the Digitalis man, *et id genus omne*, have devoted their collected genius to the great work of controlling the aberrations of this viscus. Opposing the effect—forgetting the cause!

Scriptural physiology is still the best—the *Life* of man is in the *Blood.*

The heart is a necessary organ, a vital organ, but the great changes in which the operations of life essentially consist, take place in the interstices of tissue around the capillaries.

The great force of the circulation is found in the capillary tissue.

This force is the exact measure of the amount of tissue metamorphosis.

When tissue metamorphosis is at its maximum, the rapidity of the local circulation is at its maximum—there is "*determination of blood,*" *hyperæmia*, ultimately *hypertrophy*—or, if formative power be deficient, or there is defective blood, there is suppuration or kakoplastic deposit.

When the blood is deficient in the appropriate elements of nutrition there is necessarily less capillary force. When *poisons* are in it, there is necessarily less capillary force. This, whether you call the force *physical* or *vital.*

When the capillary force is lessened, there is always *Congestion.*

When the capillary force is increased beyond the capacity of the formative force, there is always *Congestion.*

The first is passive, the second active.

——"Facies non omnibus una,
Nec diversa tamen; qualem decet esse sororum."

Somebody has recently grown very facetious over the phrase "*blood-poison.*" Is not somebody aware that all we know of disease is summed up in *blood-poison?* In fact, as well as Scripture, the Life of man is in the Blood—and the Death of man, as immediate correlative, is also to be found in the same all-pervading, all sustaining fluid. *Corpora non agunt nisi soluti*—and no tissue is renovated or healed without healthy blood. There is a world of truth in some of these old maxims.

In passive congestion the blood is charged with constituents which lessen or forbid its affinity for the tissues, or there is mechanical obstruction to its flow.

In active congestion the same event follows from a different cause. Excessive tissue change, generally FEVER, or locally, INFLAMMATION, charges the blood with effete materials, so abundant that their non elimination by the overworked excretories produces the same effect as poisons taken in from without—or the exudation and new formation of the inflammatory process involve mechanical obstruction, just as would a ligature upon the vein or veins beyond. Or both these causes conspire.

Thus the cause of the impaction of blood in any part, or briefly, *congestion*, may be in the part itself, or in the whole circulating mass, or localized upon the proximal or distal side of the part. Mechanically obstructive, or dependent on loss of affinity of the blood for the capiliary wall.

Thus the cause of congestion may be anything which impairs the affinity, be it chemical or vital, whatever you choose to call it, of the part involved, for the blood which should permeate it, or, *vice versa*, of the blood for the part—or again, mechanical obstruction.

Every pathologist now recognizes the radical diversity of Portal Venous Congestion and Hepatic Venous Congestion, and at the same time, will admit hepatic stasis of blood from the pressure of tumors or deposits, or the immediate or remote local effects of common "inflammation."

He who now says "Congestion of the Liver," as though that gave the whole story, has advanced but little beyond the "Liver Complaint" of the Fathers.

There is yet another element to be taken into consideration in this discussion—one which the vitalists of the Paine stamp consider the only one, and which humoralists are too much disposed to wholly ignore. This element is the nervous apparatus. Before the true mechanism of nervous action was unfolded by the present writer, the pathologist always had ready excuse for his ignorance of the real changes which take place in the various processes of "*inflammation*" or "*congestion*," by invoking the benevolent interposition of the "vital properties," as though the phrase meant anything!

Men, accustomed to the ordinary methods of scientific inquiry, wandering into the field of medicine, were amazed at the fossil formulæ piled up to bar further progress. The nervous system, with "vital properties," *ilities* and *icities* in abundance, was the chosen field for bush fighting. The vitalists are the shrewdest of intellectual guerillas. The contest seemed necessarily interminable, but happily it is no longer requisite. The mechanism of nervous action being now well understood we can fully appreciate its influence upon the local changes congestion, inflammation, and kindred modifications of natural processes.

For the nerve fibre or tube simply determines molecular and cell changes in the part, which to a greater or less extent increases or diminishes the affinity, be it physical or vital, of the tissue for the blood. There is no new mechanism supplanting that of health—there is no novelty of process.

Change (molecular), however produced at one extremity of a nerve conductor, manifests itself by change (molecular) at the other extremity of the nerve conductor, (or it may be a second or even further series—"reflex,") increasing or lessening the affinities, or changing the structure involving dilatation or contraction of the contractile parietes of the blood vessels, or modifying nutrition or secretion, (identical physiologic processes,) and so on.

The whole secret of the nervous action in the part is involved in the molecular change produced, be it increase, lessening or mere alteration.

Both pathologically and therapeutically this change is of the highest interest.

Once for all, this change is not an abstract, metaphysical, *spiritual* affair, but a positive, *material* composition and decomposition. Not a mere play upon "*properties*," but a physical change of elements and compounds, as clear and unmistakable as the reactions of a chemical mixture. Whether it be chemical or no, is *not* the question. Congestion may be produced by the nervous action alone. The blush is a tempo-

rary congestion from this cause. A jaundice, a diarrhœa, diuresis, diaphoresis, etc., etc., how often are they seen from the same cause!

Not more strange than the riving of a tree by electricity, or the explosion of gunpowder, or mixed oxygen and hydrogen, by the "imponderable" heat.

Congestion is only relieved by the restoration of the affinity—call it physical or vital as you please. It may ultimate in death from immediate impairment of the function of the organ. Witness congestion of the lungs, of the brain, of the kidneys, the effect becomes the cause of death.

It may ultimate in gradual dissolution—chronic disease. Or "inflammation" supervenes, with destructive or conservative processes.

Every organ is an excretory so far as every other organ is concerned. Failure of one in its nutrition, or secretion, which is its correlative, fills a part or the whole of the vascular system with effete substance, which lessens the affinity of the blood for another organ or tissue, and congestion ensues. None more frequently perhaps, than the skin and kidneys.

"Congestion of the brain," "congestion of the lungs," "congestion of the bowels," etc., etc., are oftener the results of morbific causes operating on the skin or kidneys, than from inherent affection of the parts themselves. In this climate the skin and kidneys are especially liable to be the organs at fault. The kidneys are the most important of all excretories—they are the most frequently and readily called into vicarious action. It is safe to say that half at least of the so-called congestions of remote organs, brain, lungs, etc., are the result of failure of the kidneys or skin in their eliminatory functions.

Hence blood-poisoning, a phrase sneered at by sciolists, by vitalists and worshipers of Paine.

Alvine excretions may fail, but so long as the kidneys are perfect in the performance of their function, remote organs, and the system in general, escape harm. They are the true safety valves.

True therapeutics consist in elimination—restoration of normal conditions, and provision for *renewal*.

Not only the vascular system, but the nervous system, and last not least, the nutrient apparatus must be attended to by the therapeutists.

Topographical—"specific" nosology and nostrum making, regular and irregular, have had their day. PHYSIOLOGY, *otherwise* NATURE, is now in the ascendant.

THE TREATMENT OF HEALTHY ULCERS OF THE EXTREMITIES BY "SEALING."

By W. B. SLAYTER, M. D., of Chicago,

Graduate Royal College of Physicians of England, Royal College of Surgeons of London and Dublin. Late House-Surgeon of Westminster Hospital, London.

The treatment of healthy ulcers of the extremities by sealing, has received little or no attention from the profession in this part of the country, although in many of the Eastern cities and Europe, it is employed by many of the most eminent surgeons.

The treatment consists in applying around the ulcer and in the sound skin, narrow strips of adhesive plaster. A piece of thin oil silk is then placed over the ulcer and affixed to the plaster by means of collodion; the part is then bandaged and kept as quiet as possible. The advantages of this treatment are, 1st. Healthy ulcers heal more rapidly than by the ordinary methods of treatment. 2d. It gives very much less trouble. 3d. The surface of the ulcer can always be seen without removing the dressings.

1st. Numerous cases have been published in "Braithwait's Retrospect," and other journals, clearly showing that ulcers which are inclined to heal slowly, have, under this treatment, very rapidly put on a healthy appearance and filled up; and in my own practice at the Westminster Hospital and other

places have witnessed the marked success which has attended its use. In the Westminster Hospital, where numerous cases are always to be found, the various treatments have been tested, and in the majority sealing has been found most beneficial; so much so in fact that in most of the London Hospitals it is employed as a local dressing almost altogether. It prevents access of the air to the surface of the ulcer, thereby assisting materially in rapid cicatrization.

2d. It gives far less trouble both to the surgeon and patient, as it requires to be removed only once in three or four days, or where there is little suppuration, once in a week or ten days. Every surgeon knows the importance of leaving an ulcer undisturbed as long as possible, so that the new skin as it forms may not be pulled off with the dressings. Independent of these advantages this treatment in some cases very materially relieves the dull aching pain attending some forms of ulcers.

In conclusion, I would strongly recommend it to the notice of the profession, as I am convinced that in the majority of cases they will be well pleased with it, and inclined to use it to the exclusion of all other local dressings.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

CHRONIC CONJUNCTIVITIS—GRANULATED LIDS.

GENTLEMEN:—The form of disease to which I ask your attention to-day is one of the most common, and in some respects the most obstinate, affections of the eye, which you will have occasion to treat.

It is found in all classes of society, but more frequently among the poor. At the West there is scarcely a malady

which causes more physical and mental suffering than this. It is, therefore, worthy your especial attention.

The symptoms of this affection do not need a long description. A single inspection of the palpebral conjunctiva is sufficient to form a diagnosis.

There are two principal forms of granulations—a simple hypertrophy of the papillæ, as also of the mucous membrane itself, and a form, characterized by the presence of yellowish white gelatinous elevations, scattered upon the hypertrophied conjunctiva. These two forms are very often found existing in different degrees in the same eye. Occasionally a small portion of the lids nearest the external and internal angles is alone affected. The semilunar fold, with the caruncla and the duplicature, are perhaps the portions most liable to take on this condition.

There is usually an increased secretion of tears, mucus, and from the meibomian glands, which is especially observable after sleep. The lids are more or less tumified and tend to keep partially closed. The eyes become readily fatigued in reading or writing, especially by artificial light. Vision is, to a certain extent, impaired by the increased amount of mucus spread over the cornea. The vessels of the sclerotical conjunctiva are apt to be congested, and to encroach upon the cornea, especially its upper portion. In time, from the constant rubbing of the roughened lids, the cornea becomes ulcerated and so covered with vessels as to destroy vision. It is wonderful, however, to mark the differences in the effects of this disease in different individuals. While one patient, with a very slight degree of granulated lids, will experience so much irritation and disease of the cornea as to render him almost helpless, another may have, for a long time, enormous masses of granulations upon the conjunctiva, and yet the cornea may remain almost perfectly clear. Many of the differences which you will observe in different cases are inexplicable.

The course of the disease, after it is once established and not modified by treatment, and the manner in which it proves

destructive to the vision, by secondary disease of the cornea, have already been described. If this secondary disease does not supervene from the direct effects of the granular conjunctivitis, it is almost certain to follow from the effects produced upon the lids. You have already seen several cases illustrating the manner in which the lids are permanently injured by this disease. The conjunctiva and tarsal cartilages eventually become atrophied and covered with cicatrices; the tissues of the lids become so contracted as to either change the direction of the cilia by turning the whole edge of the lids against the globe, as in entropion, or by changing the relative position of the follicles of the cilia themselves, as in trichiasis. In this complication the lids may remain, for a period, quite normal in appearance. The hardened contractions and cicatrices of the conjunctiva, with the misdirected cilia, rub upon the cornea and almost inevitably produce its destruction.

The chief cause of Trachoma is neglected or mal-treated conjunctivitis. At the West that form of inflammation termed catarrhal, is the most prevalent cause. Muco-purulent and purulent conjunctivitis, if not speedily arrested, are almost certain to produce "granulations." With some patients there seems to be no apparent cause; without change of external circumstances, without active inflammation or marked congestion, they complain of trifling irritation of the eyes, especially in reading. On an examination of the lids, the palpebral conjunctiva will be found covered with fine elevated points of granulations and enlarged vessels. I have found this form of disease not unfrequent, and although it is sometimes difficult to detect any evident causes, it is often the result of too much work with the eyes, and of constant exposure to slight causes of irritation, as dust, wind and smoke.

In all cases of chronic conjunctivitis, with granulations or hypertrophy following acute inflammation, you should be exceedingly guarded in giving a prognosis. This can not be called a disease, which tends to recovery by the simple efforts of nature. In very young children there is perhaps more hope

of total recovery without treatment than in adults. Patients with good general health, and surrounded with favorable circumstances, are in less danger than those who do not possess these advantages. That class of patients to which I have alluded, with simple uncomplicated granulations, without previous symptoms, are usually readily relieved by suitable treatment.

But with patients as they are generally found, who, from neglect, ill-treatment and exposure, have suffered from acute and chronic conjunctivitis, till the mucous membrane has become covered with granulations, the tissues atrophied and the cornea ulcerated, I consider the prognosis in regard to *perfect* vision as exceedingly grave. Unfortunately these patients are principally among the poor classes of society; they are often deprived of suitable food, and by the ordinary performance of their duties are exposed to the active causes of disease. Such patients, when suffering from this disease, seldom continue treatment after they can resume their labors, even if they are not cured. The disease soon reappears with its former violence; treatment is again sought with the same results. Relapse follows relapse till vision is permanently injured.

I think any one who has watched the treatment of this class of cases in the European clinics, and also in the Eye Infirmaries of this country, will be convinced that trachoma as usually observed, is a very serious disease. In a large proportion of cases just described I believe it is incurable, in the strict meaning of this word, for there will remain for years, even if vision is almost normal, a peculiar tendency to congestion from slight causes; upon examining the conjunctiva it will be found to present an appearance differing from that of health.

In reference to treatment, I have little to say in comparison with what has been written upon this part of our subject. I can only offer a few suggestions, referring you at the same time to the chapters in our best text-books to convince you that the combined experience of the world has failed to dis-

cover a plan of treatment which has removed "granulated lids," from the list of the opprobria of medicine. Still you must not suppose we can do nothing. By patience and judicious use of suitable remedies you will sometimes absolutely cure severe cases of this disease, and very often so far relieve pain and discomfort as to enable patients to pursue their ordinary occupations.

As regards the patients themselves, there are three distinct classes, each requiring in some respects a different course of treatment. The first comprises healthy, vigorous individuals, in whom the disease is, perhaps, purely local. The second may include those who are of a sound constitution, but who, from their disease, pain, anxiety, want of exercise, pure air and attention to the ordinary rules of health, have been reduced in strength and vitality. The third class includes those who suffer from a bad diathesis, the scrofulous and the syphilitic. The treatment of the first class is almost entirely local; in the second class, the health must be restored by placing the patient, as far as possible, in such relations as will improve his spirits and strength. The use of tonics and restoratives are also indicated. The third class of patients require constitutional treatment—usually termed alterative—with strict attention to everything that can effect the general health.

Patients should be removed from the influence of whatever can irritate the eyes, as dust, smoke, and too brilliant light. Absolute rest from the use of the eyes is demanded. Nutritious diet, but not in too large quantities, is required, and in ordinary circumstances patients should not be permitted to sleep through the day, especially after eating, since the eyes tend to passive congestion during sleep.

Collections of mucus and other secretions around the eyes should be carefully removed by gentle sponging with tepid water. At night the edges of the lids should be covered with some form of simple ointment to prevent the accumulation of hardened secretions and consequent adherence of the lids.

The direct treatment of the disease consists in the applica-

tion of caustic astringents and in the removal of the granulations by means of the knife or scissors. The latter plan is only indicated in cases of elevated, wart-like granulations, and when adopted, great care should be taken not to include the true conjunctiva, the destruction of which is liable to produce uneven cicatrices.

Skill in the use of local caustics depends almost entirely upon the selection of the proper strength. Although there are several of these remedies which may be used with benefit in different cases, after trying nearly all of them, I now depend in most cases, upon nitrate of silver, crystal sulphate of copper, and liquor plumbi subacetatis, principally, however, upon the two former.

It is difficult to describe the various conditions of the conjunctiva which you will observe in different cases of this disease. And yet it is important for you to learn what cases usually require strong, and what weak solutions of caustic. I shall, therefore, be obliged to depend upon the cases which I shall, from time to time, bring before you, to illustrate this subject, and shall take particular pains to point out the peculiarities of each case with the strength of the remedy best adapted to it.

I would advise you to use the solid nitrate of silver very seldom. This caustic, reduced in strength one-half, two-thirds or three-fourths, by means of nitrate of potash melted into sticks with it, may be used with benefit, although I almost invariably apply the remedy in solution, with a brush, as already described. Strong solutions should not be dropped into the eye, since they can not in this way be applied equally over the diseased membrane, and the secretions from the eye destroy their full action. It is well for you to commence with weak solutions, gradually increasing their strength according to the effects produced.

In acute conjunctivitis I am inclined to believe practitioners usually apply caustics too weak; in chronic inflammation too strong. If you pursue the course I have just advised, ther

will be little danger of doing injury. The sulphate of copper if in the form of a smooth crystal, is a most valuable remedy in a large number of cases. As a rule, you will find one application daily of the above mentioned remedies sufficient. Trial alone will teach you whether the treatment should be repeated daily or three times a week.

Whenever the cornea is affected with granulations or vascularity in connection with trachoma, the latter disease must generally be relieved before the cornea will improve.

CASE OF FOREIGN BODY IN THE UTERUS.

By JOHN G. MEACHEM, M. D., of Racine, Wis.

A few weeks since I was called to visit a Mrs. W—, who gave me the following history of her case: About a year and a half ago she was treated by a physician for ulceration of the os uteri. She had suffered considerably during the flow of her menses, and had a large leucorrheal discharge during the interval. Solid nitrate of silver had been repeatedly resorted to, for the purpose of cauterizing the ulcerated surface, and after a time it was discovered that the mouth of the womb was too small. Whether it was so in the beginning, or whether it was made so by the repeated applications of the caustic, she could not tell, she only knew that her physician did not observe it until he had treated her a long time.

After the discovery was made he resorted to bougies of Ulmus Fulva for the purpose of dilatation. One bougie after another, increasing constantly in size, had been introduced, until the os was pronounced natural.

My grst visit was made just six months after the last visit of her former physician. The patient informed me that she had suffered much more since her treatment than before, and she was quite sure that it had proved an injury instead of a bene-

fit to her. She had experienced intense pain in the back, through the hips and down the limbs. She had painful micturition, slight chills, and fever daily. A profuse purulent discharge from the vagina, increased by hypogastric pressure. The pain attending the flow of her menses she thought equal to that of parturition. Her appetite was gone, and she was considerably emaciated, though a year before she was quite full and fleshy.

I suggested the use of the speculum as the only means of ascertaining her true condition, to which, however, she demurred, saying that she had no "farther confidence in that instrument," and wished me to resort to some other mode of diagnosis if I could. My firmness at last overcame her objection, and with the utmost difficulty, on account of the soreness and irritability of the parts, I introduced a four-valve speculum. The whole neck of the uterus presented a mass of ulceration. A little firm pressure over the hypogastric region, as before stated, would cause a free flow of pus from the uterine cavity. On introducing the sound the cavity was found to be more than twice its usual size, and by gently manipulating with the instrument a hard, moveable substance could be distinctly felt. The sound was withdrawn, and a pair of long uterine forceps introduced, and search made for the substance indicated. After a few moments a piece of wood, two inches and a half in length and half an inch in breadth, was withdrawn. It was black, and very tough, resembling a piece of whalebone, but upon close inspection proved to be one of the slippery elm bougies used more than six months before. It is needless to say that my patient made a very rapid recovery under simple treatment; the cause of all her late suffering having been this "sliver" in the womb.

Remarks on this case would seem to be needless, as the lesson taught by it is so plain that "he who runs may read."

SELECTED.

ON THE PROGRESS OF ANATOMY AND SURGERY DURING THE PRESENT CENTURY.

By WILLIAM FERGUSSON, F. R. C. S., F. R. S., Etc

LECTURE I.—Delivered at the Royal College of Surgeons of England, 1864.

MR. PRESIDENT AND GENTLEMEN,—When the honor was conferred upon me of being appointed Professor of Human Anatomy and Surgery to this College, I felt uncertain as to the manner in which I could best fulfil the duties pertaining to such an important office. Considering the vast fields of anatomy and surgery which I had to choose from, the difficulty of selecting subjects for six lectures seemed far from great; yet reflection indicated that already the laborer had been at work. In most departments the harvest had been stored, and little remained to be gleaned or garnered which could possibly be put in comparison with the knowledge already in man's possession. To one who has been a laborer in our profession for well nigh forty years such a selection might at first thought seem easy. A teacher of surgery for more than thirty years might surely feel at little loss for material; but that very fact in a manner tells the real difficulty, for as a teacher one is necessarily in almost constant contact with the profession, and whatever he may have fancied new or of value has already been made public by the usual channels. In conversations with assistants and friends, in lectures, in the operating theatre, in the pages of public professional journals, in papers for Societies, in pamphlets, and even in portly volumes, the teacher of old standing and fair repute has already communicated his ideas to his professional brethren so freely and amply, that in his latter years he stands literally unburdened of all to which he may at any time have had original claim. It has been his glory to spread knowledge as readily and rapidly as it may have come within his own ken, and such originality as may have been his own has long since become the property of his profession.

The dilemma with me was that I had nothing new to say. More than twenty years' teaching in a London college and hospital theatre had in a manner "used me up," and, thinking of the kind of audience I might naturally expect within these walls, I had hesitation and doubt as to what might best suit the occasion.

Two courses came prominently before me. I might select a single subject, and say all about it that had been said before by others, and repeat or add all that I myself had said or thought further; or I might select several subjects in which I myself had taken special interest, or had peculiar opportunities of studying, and lay them before my hearers in such a way as to give the appearance of novelty and attraction to an audience assembled in the heart of London, and in the metropolitan abode of English surgery.

Of the two courses I have preferred the latter. If I have nothing to say that is new to my own mind, I may still labor, though in a somewhat novel sphere, to impress such truths as I have learned from experience, to doubt where I have reason still to do so, and to venture such suggestions and forecasts of thought as may become one who has spent his whole professional life in teaching, and who now finds himself in the responsible office of Professor of Human Anatomy and of Surgery in this great corporation.

About the year 1825, when my first intimate connection with the profession began, there was a period of calm (at least that is my impression) such as had not been for many years, and such as none of the present generation have seen. There was nothing new in British surgery, and little from abroad to attract special attention. The great impulse given by Hunter and his disciples had become in a manner embodied with, or as some might think, become the embodiment of the profession. On the continent, amongst surgeons, Dupuytren stood supreme; whilst Graefe, Lisfranc, Larrey, Dieffenbach, and Roux were but a shade behind. The latter had written his celebrated "Parallel," and already Velpeau had indicated his growing worth. In America, the names of Mott and Warren were associated with the boldest deeds in surgery. Here, amongst ourselves, Home, Cline, Blizard, Abernethy, Cooper had passed away, or well nigh faded from the scene. The same might be said of Todd and Colles in Dublin. Crampton, Carmichael, and Cusack worthily held the highest places in that city; and Brodie, Travers, Wardrop, Guthrie, Anthony, White, Key, Stanley, Green, and others yet alive, whose names and

deeds inspire veneration, held sway in the great metropolis. In Glasgow, John Burns labored, I may say alone, in a field which had been previously occupied by himself and his worthy brother Allan. In Edinburgh, the reputation of the Monros gave high character to the anatomical and pathological aspect of surgery, and the family reputation was maintained by the third of the name. The brilliancy of John Bell had in the early part of the century given great *éclat* to the school (which was enhanced by his brother Charles, whose name may be honorably included amongst the worthies of London, at the time I speak of,) and the solid worth of Benjamin Bell had given a high character to Edinburgh surgery.

About this date the field of surgical practice in the northern metropolis was held by gentlemen of high social and professional stamp, but they were neither professed teachers nor long-experienced hospital surgeons. Each had served a few years only as full surgeon in the Royal Infirmary. One (Mr. Wishart) had published translations of Scarpa's works on Aneurism and on Hernia, but others were unknown to more than local fame. From this list I may bring out and except the name of Russell, the author of an original and still standard work on Necrosis, and at that time revered as a surviving pupil of John Hunter. He was, moreover, the first professor of clinical surgery, and the only one bearing such a title in the United Kingdom. His position as a model surgeon was, however, by no means prominent, and the "pure" surgery of Edinburgh (as the term goes) was little different from that which might be found in any of the large provincial towns in Britain. There was no chair of surgery in the University. That of the College of Surgeons (which was shortly after abrogated) was held by a clever man, whose health and temperament prevented him taking a foremost rank in practical surgery, and there seemed little hope for a continuance of the reputation of this school, when suddenly there appeared on the scene three men whose labors have added substantially to the renown of the Scotch school, and whose names will be imperishably associated with the history of British surgery. These men were, John Lizars, Robert Liston, and James Syme. I trust that I may be pardoned for making pointed allusion to these surgeons but as it was from them that I gathered many of my own early views in surgery, I should not wish this opportunity to pass without giving them that honorable mention which, in my opinion, they richly deserve.

Mr. Syme still lives in active manhood, with a world-wide

reputation second to none amongst living surgeons. It is considered unbecoming to say that of one yet active on the scene which may be said in after years. Modern surgery owes him much, as I shall show in future lectures. Eulogy might seem to partake of flattery, and for my present purpose it may be sufficient to state, that at the date referred to, this gentleman evinced all that energy of character and aptitude for clinical teaching and for practice for which he has since become so distinguished.

Mr. Liston's fame, at this date, particularly as an operator, was well nigh as great as at any period of his comparatively short but brilliant career. In after years his soundness as a pathologist became more conspicuous; and the numerous valuable preparations in the museum of this College, which formed part of his collection, bear ample testimony to the greatness of his doings in practical surgery. Both he and Mr. Syme had already published those remarkable essays on Practical Amputation which, with the example set by their practice, went far to give that development to the flap operation since attained. Many circumstances contributed to give Mr. Liston early fame in Scotland. A well-developed frame, a broad forehead, a strongly marked, handsome countenance, indicative of great courage and decision, and an eye of piercing brilliancy and great expression, at once impressed those who sought his aid with a conviction of his powers. With these were associated a hand alike marvellous for its great size, its silent expressiveness, its vigorous firmness, its lightness, and its dexterity. It was aptly said of it by a distinguished lay contemporary, the late Lord Robertson—"If hard as iron and true as steel in the theatre of operation, it is soft as thistledown when applied to the throbbing pulse or aching brow." The remembrance of that hand is still fresh on my memory.

Some early operations of great magnitude and comparative novelty, aided by a certain amount of jealous opposition which merit is sure to call forth, brought Mr. Liston's fame impressively before the public; and among his achievements may be mentioned the successful removal of a scrotal tumor of more than forty pounds weight—the first operation of the kind ever performed in this country—and successful ligature of the subclavian, which had been essayed in vain by Ramsden and others in Britain.

When personal recollections have passed away, there will remain much to associate Mr. Liston's name with surgery, but the greatest features of his teaching powers will be forgotten.

With less than average facility of speech, he had a manner in all that he did before his pupils that produced the deepest impression; and there was a style in his operations which has had more influence in this department among a large number of pupils than has been produced, in as far as I can make out, by any other man in the history of surgery. Only those who have seen him can thoroughly appreciate what I now say.

Of Mr. Lizars there is now probably less known than of the two gentlemen just referred to; but his fame was great at the time. His folio work on anatomy, with which he incorporated most of his views on operative surgery, had contributed largely to his reputation. Initiated to the profession by John Bell, to whom he served a pupilage, he seemed to have imbibed some of the characteristics of that great surgeon. He was a very successful teacher, both of anatomy and surgery, an excellent pathologist, a brilliant and daring operator. His name will ever remain associated with the early history of modern operations on the upper jaw. He was the only man in Scotland who had placed a ligature on the innominata. The operation was unsuccessful, but it went far to prove, what was then not so well recognized as now, that secondary hemorrhage in such cases is more likely to come from the distal than from the proximal end of a tied vessel. He was the second to perform ovariotomy, and its practical originator in Britain. Like many pioneers in art and science, he was for this assailed by a certain amount of ridicule associated with vigorous opposition, and thus was thrown into abeyance an operation which, thirty years later, has produced as much excitement as has been associated with the early history of any great surgical proceeding. Whatever may be the fate of ovariotomy, the name of John Lizars must always remain associated with it.

I may be wrong, but the impression is strong on my mind, that an impulse to the more acccurate study of surgical anatomy arose coeval with the development of the Hunterian operation. Before I knew the profession, all the great arteries had been tied, from the superficial femoral to the abdominal aorta and innominata, on the principles of our great surgical philosopher. The surgical anatomy of the arteries had occupied the attention of many first-rate anatomists of the early part of this century; and whilst the operations in question were excitingly attractive, others were not overlooked, and hence surgical and regional anatomy took a wider field, and the works of Charles Bell, Abraham Colles, Astley Cooper, John Shaw, Hargrave, and of others, testified to the zeal and

accuracy of surgeons in those times in anatomical pursuits having direct relation to their calling. It is an anecdote worth bearing in mind that when Astley Cooper was engaged in his great and interesting labors on hernia, nothing would satisfy him but a sight of the fact that the obturator artery might encircle the inner side of the neck of a crural hernia. The first preparation that gave this proof was in the museum of the famous teacher of anatomy in Edinburgh, John Barclay (now incorporated with the collection of the Royal College of Surgeons of that city), who actually forwarded it to London to satisfy the hesitation of the great surgeon. It was returned with most complimentary thanks; and this anatomical fact, now familiar to the simplest novice, was soon after made extensively known to the professional world.

There were manuals of anatomy in those days, written by men who have since held the highest professional positions, which really left little for the practical surgeon to desire; in fact, the subject was in a manner exhausted. Whatever was essayed as novel, seemed in reality but a repetition of something already done and known; and, with an occasional exception, there was little left for the modern anatomist but transcendentalism and minute observation. Investigations on ill-defined and obscurely developed quantities have, I fear, taken largely the place of wholesome surgical anatomy; and whilst I shall not go so far as to say that they are not of great value to the education of the practical surgeon, I may state that I have often felt inclined to protest against a system which seems to draw little or no distinction between this kind of so-called philosophy and that common-place, but common-sense, anatomy which is of essential service to the practical surgeon. With some it almost appears as if the bulk of the two thousandth part of an inch were of equal importance to the surgeon as the outlines of the sterno-mastoid or deltoid muscles; and with many it seems to be that there is really little or no difference of essential value between "blastema" and bone, "molecule" and muscle, "cytoblast" and cellular membrane!—nay, actually that once familiar term is now in some degree tabooed, and a man's acquirements are suspected if he does not use instead the modern one of "areolar tissue."

In surgical pathology, it was known that a person might live with an obliterated aorta, and might survive the loss of an upper or lower extremity. Inflammation with denudation of bone was commonly believed to necessitate amputation; and diseased joints with ulceration of cartilages, particularly

if denoted by crepitation, were generally deemed incurable, excepting by removal of the limb. Tumors of enormous size were frequently met with, and the disease then familiarly known as fungus hæmatodes was more common than in the present day: in both instances doubtless from timidity on the part of those who feared to meddle with what the modern surgeon arrests in early progress. But a vast amount of important material had been accumulated by the practical men of the day, and the works of Lawrence on Hernia, Brodie on the Joints, Thomson on Inflammation, Hodgson on the Arteries, and Cooper on Dislocations, may be referred to as types of the most valuable and precise surgical pathology which had been given to the profession. Pupils and practitioners had for study and reference in surgery, and to some extent in anatomy, the standard works of Boyer, of Benjamin Bell, of John and Charles Bell, of Abernethy, and of Samuel Cooper, whose "First Lines" was for a long time the favorite text-book, and whose famous Dictionary has, perhaps, not been excelled even to the present day.

Some naval and military surgeons had contributed largely to our general knowledge. Besides the labors of Hunter and of John Bell in these departments, it is in accordance with the intended spirit of this lecture that I should refer to those of Veitch and Copland Hutchinson, of Larrey, of Hennen, and of Guthrie. Although I am myself disposed to take exception to some of the doctrines of these gentlemen as being invariably applicable to the practice of surgery in civil life, I willingly acknowledge the great merits of those who gave us so much information after the cessation of our wars with the first Napoleon, and that much additional material, of unquestionable novelty and value, has been added to our stores by the publication of the so-called military surgery of that eventful period.

In Smiles' "Lives of Engineers" a dozen or more of those who first worked in this noble science are told off, each with a brief, yet interesting memoir, comprised within a few pages; but as engineering has advanced in the progress of time, the works of Vermuyden and Myddleton, of Metcalf and Brindley, seem to be surpassed by those of Smeaton, Telford, and Rennie, until at last a whole volume is required for the life of the elder Stephenson. Were we to compute the progress of surgery in a similar manner, to what limit might the lives of the great surgeons not go? To look within the present century, volumes might be written, in which most of the names

already mentioned would stand pre-eminent, and it would not be difficult to mark out many of the living generation with whom the progress of surgery is closely associated. It is the boast of those who live in the nineteenth century, that progress in all that pertains to civilization has been greater than in any similar period in history. I can not venture to claim for surgery the world-wide impression that has been made by steam, by electricity, by engineering, or by mechanics. Yet our art and science have not stood still. If there have been any changes and reforms in our laws and civil institutions for the improvement of our social atmosphere (and who can entertain a doubt on the subject?) we may point to our changes, our reforms, our improvements also.

Few things have struck me as being more remarkable than the simplicity of appliances and dressing in modern surgery among the best-class practitioners. This arises, I believe, from a better appreciation of the powers of nature, and a more humble idea of our own as to forcing that which can only come in time. It is, perhaps, in the increased knowledge and better treatment of wounds that the true philosophy of surgery has been most evinced in modern times. The days of the "secret dressings" and of "sympathetic powders" have passed away; and such a man as Colbatch, whom John Bell designated as a "respectable quack," or a pretender like Sir Kenelm Digby, were he even, like that famous man, secretary to a king, would have no influence on the profession, and little on the public, now-a-days. Yet Digby, had he belonged to our profession, would nearly have been a philosophic surgeon. If, after bringing the edges of a wound into accurate contact, and keeping them so by simple means, instead of affecting mystery and enacting the part of a mountebank, he had told his patient that he had done all that man could, and that nature and time would do the rest, he would have struck the key-note of that which constitutes, in my opinion, a great feature in modern practice. The secresy and sympathy consisted, in reality, in simplicity; and it remained for John Hunter and for what John Bell called "the London school" to give us our present views on such subjects.

Professor Hughes Bennett, of Edinburgh, has in recent years insisted much on what he calls "rational medicine," the term evidently implying the existence of a converse practice. It is not for me, in my present position, to say much about the practice of physic, but I do not hesitate to say that there is room for "rational surgery" to make useful way. "I cure"

or "we cure" is too much in our vocabulary; and it would be more in accordance with the knowledge we possess of nature's actions were we to affect less in this respect, whilst there is a broad margin on which the guiding head of the surgeon might take full credit. It has, indeed, been truly said that surgery is the handmaid to nature; and when the service is judiciously administered our work appears in the greatest perfection. Nature, in many of her inscrutable ways, does that which offends our common humanity; she brings us fevers, atrophies, consumptions, and cancers, over which we have but little control. Livingstone has told us that in parts of Africa where the lights of civilization have not yet appeared, most of those diseases which are at present the scourge of Europe have not yet been seen. May it not be that our boasted civilization has brought upon us many of those "evils" which, with a sort of negative consolation, we say, in poetic language, that "flesh is heir to?" Does not the very style of living interfere with nature's healthful actions in civilized man? Who in these islands can boast of success in lithotomy such as that obtained by our surgeons who practice in Asia? Were cases of elephantiasis scroti prevalent among us, is it likely that we could boast of saving 22 patients out of 24 operations? Yet such success has been recently recorded by Prof. Ballingall, of the Grant Medical College, Bombay. With all deference to our friends and contemporaries, it can not be admitted that this success comes from superior skill or dexterity; it is from the subject on which they work—the nearest approach to perfect nature, irrespective of what we fondly call civilized habits.

In speaking of wounds, I should not be doing justice to my own views and experience, nor to the efforts of others, were I to omit reference to the more common use of stitches than was sanctioned some thirty or forty years ago. When early and perfect union is desired in a line of considerable length, they far surpass other methods, and when judiciously applied (possibly in many instances with a due share of additional support) they are of the utmost value. Throughout my experience I can not say that I have seen the slightest evil arise from them, whilst the best possible good has often been derived. In fact, some of the greatest triumphs of modern surgery are associated with this simple mechanical process; for how else could so much have been done with those vesico-vaginal fistulæ which so baffled our forefathers, and are now so amenable to skillful operative management? How else could the operation for cleft palate have been successfully accomplished?

How else could we have dared to lay open the walls of the abdomen to the extent of six, twelve or fifteen inches? Much has been said in recent times of the superiority of the wire over thread as the material for the stitch; but for my own part I deem the subject of comparatively little importance, whilst I do not hesitate to proclaim my preference of common silk thread for general use.

Until within the present century there was no positive remedy for stone in the bladder but a painful and dangerous cutting operation. The highest talent, skill, and manipulative dexterity have been evoked to set aside the dangers of that proceeding. Surgeons have cut twenty, thirty, fifty patients, losing perhaps only one; but a more extended experience has had the effect of bringing the average of mortality down to the certain loss of one in six or ten. Men have vainly prided themselves on their success—some because of the peculiar shape of a knife; some on the supposition that they have operated more dexterously than others; and superior success has ever been claimed on account of a special prayer and appeal to the Almighty just before commencing! We know full well how in the mysterious ways of Providence, man's best efforts have failed; his holiest aspirations have seemingly been thwarted.

Happily we of the present day have lived to see the perils and uncertainties of lithotomy set aside in a large number of instances by the less formidable and possibly more successful proceeding of lithotrity. The development of this operation has been within our own time. It is of foreign origin, and British surgeons have taken slowly to it. Until within these twenty years it was practiced by few, but latterly it has come into more general use; and if patients would but apply at an early date, when the stone is small, the judicious employment of this operation would go far to supersede the use of the knife and make lithotomy exceptional. As evidence of the high and useful character of the operation, it has been applied alike to the peasant, the artizan, and the wearer of a crown. Whilst we do all honor to the labors of Gruithuisen, Le Roy, Heurteloup, Costello, and especially Civiale, in developing this proceeding, it is worthy of note that the essential features of the instrument now in use—namely, the male and female blades, with the sharp curve at the end where the crushing is to be effected, and the screw force for that purpose—are of English origin, having been devised by the late Mr. Weiss, our celebrated instrument maker.

For my own part, I am almost disposed to consider that the treatment of distortions by divisions of tendons, muscles, and fasciæ—a treatment founded on a better appreciation than formerly of anatomy, physiology and pathology—constitutes, perhaps, the most striking example of modern improvement which I could bring to your notice. I take great pleasure in referring to a case, treated by one of our provincial surgeons —Dr. Wiblin, Southampton—who in the discharge of his duties, like many others of his fellow-laborers, undertakes the treatment of most ailments that come within his cognizance with energy, skill, and success, such as may well be admired —possibly envied—by his metropolitan cotemporaries. Cutaneous puncture and subcutaneous division with a narrow blade, so as to prevent the access of air, make Stromeyer's name worthy of honor in all time to come; and the development of the new tendon in some of these cases is a fine illustration of what Nature will do where man judiciously interferes with some of her imperfect works.

How hopeless was our practice for strabismus in former times! We neither knew the cause, nor the means of cure. In the generality of such cases the division of the internal rectus of the eye restores the symmetry of these important and attractive organs. Here the simplicity of the idea almost leads us to overlook its magnitude and scientific character. The illustrious Roux thought his achievement great when he could close by operation the cleft palate as if it were a hare-lip, and be successful in securing union in two cases out of every three operated on. It is my intention to show you in some future lecture how, by division of the levator palati on each side, the operation may be rendered almost as certain in its results as that for fissure in the lip, and that the average of failures is about 1 in 27 or 30.

The skill with which raw surfaces are made and approximated says much for modern progress. Our plastic operations are more marvelous than ever entered the imagination of Taliacotius, or the poetic mind of Butler. The almost fabulous transplanting of one part of the body to a distant surface has been realized. The skin on the back of the neck has been lifted forward to supply a deficiency in front, and a portion of the skin of the abdomen has actually been made to do permanent duty on the forearm. Amongst plastic operations, and as illustrative of the value of union by the first intention, I may here refer especially to reparations on the face, and to the closing of wounds and unnatural openings in the urinary

organs and parts of generation, particularly in the female. A word of praise in these departments is justly and specially due to our transatlantic brethren, and amongst ourselves there are many whose triumphs in these cases do the utmost credit to modern surgery.

The application of the stethoscope to surgical diagnosis, the exclusive use of the microscope in pathology, the invention of the laryngoscope and its recent application in practice, are all interesting features in modern surgery. The ophthalmoscope, too, is one of the most ingenious and clever inventions for which surgery is indebted; nor can there be a doubt that, in special cases, the speculum is also of vast service. But I must leave it to greater enthusiasts, and those more skilled than myself, to dilate upon the marvels divulged by these instruments and to fix upon their relative values as additions to the surgery of the present century.

Ophthalmic surgery has made wonderful strides within our own time; but I do not profess myself competent to dwell on such a theme. It is pleasing to see that those who excel in this department, particularly amongst ourselves, are gentlemen who, from their education and competency, are fitted to hold the highest places in general surgery, and that many of them have held, and now hold, the foremost rank in our profession. Let me here express a hope that some future professor in this chair may be able to say as much for all who may devote themselves to the specialties of modern custom.

Excisions, or resections—the words seem synonymous—have claimed a large share of modern attention; for although we owe to the last century many such proposals and several examples, it is within the present that much has been said about them. But time presses, and I shall conclude my present address by reference to some matters which need not be dwelt upon in other lectures. Of these, that of anæsthesia may be deemed the most remarkable. No single appliance in surgery can, in my opinion, be compared with it; for, although before its discovery most, if not all, of the great achievements of our art had already been accomplished, the amount of suffering which can now be set aside enables us to relieve surgery of much of its horrors, and to exclude from the patient's senses that which was anguish, suffering and torture; whilst, generally, it permits the surgeon to perform his duty with a serenity of thought and action quite unknown to his predecessors. On this subject America again must have the palm of precedence. There sulphuric ether still holds the first place as the

anæsthetic agent; whilst with us chloroform, whose influence was first observed and made public by one of our contemporaries, is considered the most useful. Not long ago Dr. Marion Sims, with laudable enthusiasm, claimed for metallic stitches the honor of being, in our profession, the greatest discovery of the nineteenth century. Few surgeons of practical experience, however, will endorse this. I see nothing which has transpired in the present century which, in magnitude or importance, can compare in our annals with anæsthesia; and in my mind, it ranks in value to mankind scarcely less than the results of the labors of Harvey and of Jenner.

We congratulate ourselves that we have been permitted to live in times when man has displayed his mastery over steam and electricity, and with us and our special profession there have been agencies at work whose usefulness may be said to be literally beyond calculation. I allude to the improved facilities for education, to our social professional customs, to the medical press, and our own special literature. Our schools have increased in number; our great public hospitals associate more extensively than ever, education with charity; our handbooks, our works of reference, our means for learning, our appliances for teaching are beyond compare; and facilities for studying anatomy have, by a wise legislation, been placed lawfully within reach. Our societies and professional gatherings have encouraged and facilitated the diffusion of knowledge; man meets man face to face, thoughts flash almost simultaneously from brain to brain; and there is no longer a difficulty with those in places distant from a metropolis to find out even some roundabout way of communicating interesting or useful knowledge to the profession. A surgeon to a Liverpool hospital in the present day need not, as Park did in 1782, address himself to a leading hospital surgeon in London to give currency to his aspirations; nor need the Moreaus of our day keep their originality under the "cold shade" of an academy or a corporation. Besides the facilities for individual and independent publication, there are our quarterly, monthly, and weekly journals to carry knowledge to the ends of the earth. We pride ourselves in this country on the liberty of the press; we fondly call it our fourth estate; politically and professionally it may be called the pulse of the public mind; and amongst ourselves in our own time it beats with a healthy vigor, indicative of all those changes for the better which I have endeavored to sketch, although I fear but feebly, within the limits of a single lecture.—*London Lancet.*

PERMANGANATE OF POTASH IN GONORRHŒA.

By JOHN G. RICH, M. D., Beachville, Canada West.

For the last two years I have frequently employed the permanganate of potash as an injection in the treatment of gonorrhœa, and the constant success derived from its use has been extremely satisfactory.

My usual method had previously been to administer, first, a hydragogue cathartic, then to give a mixture of cubebs, copaiva, nitre, &c., with injections of sulphate of zinc, tannic acid, &c. But since employing the permanganate my treatment has been much more circumscribed, for with this remedy alone, I have frequently cured very bad cases in forty-eight hours, and this too without its being followed by any evil effect from the sudden arrest of the discharge.

My usual mode of treatment, however, is as follows:—

℞ Potassæ Bitart. ʒj; Podophyllin, gr. j. M. In chartulas quatuor dividendus. S. One every two hours until free catharsis is produced.

After which:

℞ Potassæ Permangan, gr. vj; Aquæ Fontan, ℥j. M. S. To be used as an injection three times a day.

I direct at the same time the free employment of mucilaginous drinks, as althœa, ulmus, acacia, &c., and put the patient upon a non-stimulating regimen.

Out of sixty-four registered cases this course of treatment has failed in but two instances. And I find that recent attacks usually become arrested by it after from three to six injections. I have found it advisable to continue the demulcents for at least a week after the cessation of the discharge. In none of all these cases was the injection continued after the fourth day.

When accompanied by chordee, I usually employ the following:—

℞ Lupulin, ʒjss; Pulv. Camphoræ, ʒj; Micæ Panis, q. s. M. Ft. mass in pilulas, xvi, dividenda. S. Two, three, or four on going to bed.

I think that the permanganate of potash is a remedy deserving of more notice than physicians have hitherto given it, and hoping that my experience may produce for it a more extended trial in cases of gonorrhœa, I remain, &c.,

J. G. R.

ON THE ACTION OF

THE BROMIDE OF POTASSIUM IN INDUCING SLEEP.

By HENRY BEHREND, I. R. C. P. E., Etc.

Dr. Garrod, in his recent lectures on the British Pharmacopœia, has mentioned that the bromide of potassium, when administered in large doses, produces drowsiness. I do not know whether the profession at large is aware of this fact, but as I have never previously seen any record of it (being indebted for my first information on the subject to the statements of Dr. Brown-Séquard,) and as I have, during the past twelvemonth, had ample practical experience of its use, the following cases are submitted to demonstrate the value of the remedy in the treatment of insomnia and restlessness, accompanied by and dependent upon nervous excitement and irritability. If its employment upon a larger scale should confirm the results at which I have arrived (and of which Dr. Brown-Séquard has repeatedly assured me,) its importance cannot well be overrated; as it is better borne than opium or any of its preparations, is free from the unpleasant effects—such as headache, constipation, &c.,—produced by that drug, and the system does not so rapidly become accustomed to it as to require its administration in constantly-increasing doses.

The first case in which I prescribed it was that of a gentleman, thirty-six years of age, of highly nervous temperament, who had undergone much mental excitement consequent upon the dangerous illness of a very near relative. There was no constitutional malady present, and the only symptom was loss of sleep, and the debility, both bodily and mental, consequent upon it. He had not enjoyed a really good night for weeks, and this preyed upon him to such an extent as almost to preclude the possibility of his sleeping; for his mind was constantly intent upon this one subject, and never more so than when he retired to rest, so that it seemed as if the very effort to obtain sleep prevented its accomplishment. He was in very low spirits, and had failed in quieting the nervous system by opium in its various forms, valerian, and other antispasmodics and sedatives. He was recommended to take

twenty-five grains of the bromide of potassium dissolved in a little cold water three times a day, before meals, for a week. At the end of this time, he called to inquire if it was necessary to continue the treatment, as he had enjoyed several night's excellent sleep, and had to a considerable extent regained his former cheerfulness and mental calibre. As he was still, however, somewhat nervous about his night's rest, it was thought advisable that he should not entirely give up the employment of the bromide; and he continued taking it once in the twenty-four hours, at bedtime, for a fortnight longer. He had now implicit confidence in the power of the remedy, and, what was of still greater consequence, was regaining confidence in his own powers of obtaining natural sleep, and he gradually ceased having recourse to the medicine. He always, however, kept a dose of it by his bedside, so that if he woke in the night and was tormented by the fear of not sleeping again, he might at once take it. During the last few months this fear has also left him, and he does not now use the bromide on the average more than once in three weeks. He sleeps perfectly well for six or seven hours at a time, and wakes comfortably and naturally, with entire freedom from the dread and depression which he formerly experienced on waking.

A second case, perhaps even more remarkably illustrative of the beneficial action of this salt, is that of a gentleman, forty years of age, who consulted me in the month of October last. He was of a most excitable and nervous temperament, and was engaged in mercantile transactions of great magnitude, the extent of which indeed seemed quite to overwhelm him, although without any grounds as to a fear of their ultimate result in a pecuniary point of view. He was quite unable, however, to banish them from his mind day or night; he had lost his natural sleep, was harassed and fatigued during the day, and sought my opinion as to whether he ought not at once to withdraw from business, although the sacrifice entailed thereby would be very great, and he was most anxious to avoid it. I told him to place himself under treatment for a few weeks, and if no benefit were derived at the end of that time, such a step as he contemplated might be necessary. I prescribed the bromide of potassium as in the last case: twenty-five grains to be taken three times a day before meals. At the end of a week he was much better, slept naturally and well, and was consequently much more sanguine as to his capability of attending to his affairs. Good

sleep having been procured, I thought it better to attend to the condition of the nervous system, and ordered the sulphate of strychnia to be taken in commencing doses of the thirtieth of a grain, to be gradually increased to the tenth of a grain, thrice daily. He was advised to have a dose of the bromide of potassium by his bedside, or to take one before going to bed, if he felt nervous about his night's rest; but since the first week of the treatment I do not think he has once found it necessary to have recourse to it. He sleeps perfectly well, has regained spirits and confidence, and has quite abandoned the idea of his unfitness to attend to his business transactions. He continues taking the tenth of a grain of sulphate of strychnia twice daily.

Other instances might be adduced of a similar character, but the above will serve as a type of the cases in which the administration of the bromide of potassium appears likely to be most useful—those, namely, in which the nervous element preponderates; and it is in these that, for the most part, opium and its preparations fail to produce any good result, and are not well borne by the system, frequently even adding to the excitement and irritability under which the patient labors. There can be no doubt, moreover, that cases of this type are unfortunately on the increase, since the highly artificial mode of life of the present day, especially in large cities, perpetually stimulates the nervous energy to the highest possible degree; so that even in the strongest constitutions the mental equilibrium is but too often shaken, and the weaker ones yield speedily to the excessive demands made upon them. The dose of the bromide recommended may appear large, but it is in all cases easily tolerated, and produces neither disagreeable nor toxical effects; the appetite is not interfered with, the alvine evacuations are regular and copious, and irritability of the bladder—a frequent accompaniment of restless nights—is greatly relieved. The only unpleasant result I have witnessed has been slight and temporary headache; and Dr. Brown-Séquard has informed me that he has given it with perfect safety for several successive weeks in drachm doses. Of the temporary paralysis, and weakening of sexual desire and power, which are said to follow upon the administration of large doses of the bromide of potassium, I have seen nothing. I should wish to try this remedy in the treatment of the restlessness of delirium tremens, but have not had the opportunity since I have become acquainted with its action upon the nervous system.—*London Lancet.*

EDITORIAL AND MISCELLANEOUS

CAMP NEAR PETERSBURG, VA., July 18, 1864.

Messrs. Editors of Journal :—

In the army, quinine is a fashionable treatment for all Idiopathic Fevers. Ask what is the rationale of this treatment, and the answer is, these fevers are caused by malarial poison, and quinine is therefore the sheet anchor. These fevers may be malarial, but there is a difference in the poison, or idiosyncrasy, of the patient, or his circumstances, which change the symptoms materially, from those cases in which I have found quinine to produce its good effects.

Three-fourths of the cases of fever in this army, that I have seen, are those in which there is no intermission. I do not say that the non intermission decides that there is no malarial influence, but it must be of that nature in which quinine is not useful.

The disease may commence with a slight chill or without one; the tongue is heavily coated with a whitish fur; generally there is severe headache, which, as usual, subsides in two or three days; not severe pain in the back; pulse from 100 to 130, etc. These cases are accompanied by considerable depression of the vital power. My experience in these cases leads me not to be favorably impressed by the quinine treatment. There is often a gastric irritability, with vomiting, which quinine increases; and it often increases the headache. I have seen it given in these fevers, in from two to five grain doses, continuing it for some time, but I never in one instance saw the good effect.

In many cases I could not see any difference in the progression of the case, whether quinine was given, or nothing used. It does not shorten the disease; often decreases the desire for food, which is already much below par. My remarks have

been in reference to its use in large doses, in all stages of the disease, to break in upon the poison of the disease, and shorten it. But I will now say, that I imagine I have found it useful given in from one to two grain doses as a tonic, aided by stimulants, in those cases without gastric irritability, and after the skin has become moist.

Here, as in other lands, is found plenty of intermittent cases in which quinine does its work nobly. If quinine cures so certainly in these (intermittent) cases, it seems probable it might give more relief in the continued ones, if their poison was of the same nature. Tried practitioners of large experience, stating that the poison of these two classes of fevers is the same, leads the younger class to believe it true; but there is some difference in the poison, or idiosyncrasy of the patient, that causes a different effect of the same remedy.

In these fevers what is the treatment? It should be similar to our private typhoid fever, viz., give tonics to keep the vital powers that are held up by stimulants; and nourishing diet from the first day. I have found that the cooks of officers, who, of course, have a better bill of fare than the privates, when taken with this fever are not so much depressed, and convalesce sooner than they do, and what is still more, not so many proportionally have the disease.

The treatment must be similar to other cases where there is failure of vital power; as, articles of food that are nutritious; cleanliness; tonics; and, as a carminative and stimulant, fluid ext. zingiberis and Jamaica rum; and, above all, kind words and encouragement of recovery.

G. D. Winch, Ass't Surg., 36th Reg. Wis. Vol.

St. Charles, Minn., July 18, 1864.

Drs. Miller and Ingals :—

Permit me to add to history a case of Extra Uterine Pregnancy. Patient—Mary Kingsley; æt. 35; first pregnancy; having been married eight years; had enjoyed good health until time of pregnancy; since, she has complained of illness.

March 1st. Felt quickening distinctly.

June 18th. Taken ill, pains experienced in left side, above pubis. Confinement was expected, and Dr. J. H. Sudduth, of this place was called.

July 2d. I was called in counsel. This condition, with partial delirium, continued.

July 12th. Fever present, delirium increased.

July 16th. Pains resembling labor, continued two hours, followed by an hour of rest. Death supervened.

Dissection. The abdomen, which was greatly distended, was found to contain a large quantity of liquid. The uterus was empty, about twice the size of an unimpregnated uterus. The os sufficiently dilated to admit a finger. A fœtus of about eight pounds in weight was found in left fallopian tube, head near umbilicus.

The uterus was drawn upward and to the right, which made it difficult to reach the os in examination. No signs of life of fœtus had been observed for about two weeks previous to the death of the patient. H. H. Guthrie, M. D.

Messrs. Editors:—*Erratum.*—In the June number of this *Journal*, p. 267, (lines 8 and 9,) the sense of the last paragraph of the article over the initials J. A. A., is remarkably *obscured* by the typographical blunder in putting the word "observe" instead of "obscure," as it should have been printed. In this case, at least, the "obscure" makes the matter clearer than to "observe" it. Please relieve my idea from *obscurity* by substituting the "obscure."

Respectfully Yours, J. A. A.

The Surgeon of the Alabama.—David Herbert Llewellyn, who perished in the noble performance of his duty in the late action off Cherbourg, was the son of the Rev. David Llewellyn, perpetual curate of Euston Royal, Wilts. He was educated at Marlborough College, was an articled pupil of Dr. Hassall, of Richmond, and subsequently studied his profession at Charing-cross Hospital from 1856 to 1859. He was Silver

Medalist in Surgery and Chemistry. Of a generous and ardent disposition, he gained the esteem and regard of all his fellow-students. He was with the *Alabama* throughout the whole of her eventful career, and was much respected by all on board. We are enabled to give a copy of the last letter which we believe he ever wrote. It was addressed to Mr. Travers, the resident medical officer of Charing-cross Hospital, and is as follows:

"Cherbourg, June 14th, 1864.

"*Dear Travers:*—Here we are. I send this by a gentleman coming to London. An enemy is outside. If she only stays long enough, we go out and fight her. If I live, expect to see me in London shortly. If I die, give my best love to all who know me. If Monsieur A. de Caillet should call on you, please show him every attention.

"I remain, dear Travers, ever yours,

"D. H. LLEWELLYN."

How poor Llewellyn did his duty, as a man and a surgeon, may be judged by the following touching episode which was seen to occur during the late battle: The whaleboat and the dingy, the only two boats uninjured, were lowered, and the wounded men placed in them, Mr. Fulham being sent in charge of them to the *Kearsage*. When the boats were full, a man who was unwounded endeavored to enter one, but was held back by the surgeon of the ship—Mr. Llewellyn. "See," he said, "I want to save my life as much as you do; but let the wounded men be saved first." "Doctor," said the officer in the boat, "we can make room for you." "I will not peril the wounded men," was his reply. He remained behind, and sank with the ship—a loss much deplored by all the officers and men.—*Lancet.*

There is something in the organization of man that makes him love hero-worship, and it is natural that the unselfish devotion of the surgeon of the Alabama should excite our admiration, and it may be a subject of just pride to the medical profession, that the only worthy exhibition of character that we know, as connected with the Corsair's history, emanated from a mind that had been elevated by its study and practice. Yet it is no more than is shown by multitudes of physicians who confront danger and suffer death from disease contracted by attendance on those laboring under infectious pestilence,

and conspicuous examples of equal self-sacrifice are not uncommon, even among uneducated men. Who has forgotten that when the Hornet sunk the Peacock, during the war of 1812, three American sailors went down in the Peacock while endeavoring to save their enemies who had surrendered. The history of the Alabama does not speak well for the character of any man who was a willing agent in making up this history. She was built, equipped and manned by a people, ostensibly our friends. She never entered the port of one of the seceded States, and there was nothing Confederate about her, except her commander and the flag under which she sailed. Until her last fatal day she sedulously avoided meeting a war vessel on the open sea with all the cunning instinct of a coward, and when in the proximity of an armed enemy she repeatedly stole out, under the cover of darkness, from the neutral ports she had entered to augment her crew or procure munitions, and went over the ocean, lighting it up with the helpless, unarmed sailing vessels of the merchant service; and when a long experience with the feeble had emboldened her commander to accept a conflict with a vessel of equal strength, and after Capt. Semmes had surrendered himself and crew as prisoners, as many of them as were able took a dishonorable advantage of Capt. Winslow's humane efforts to save their lives, to make their escape.

No vessel that ever sailed on the ocean has left a more disgraceful record than the Alabama, and that surgeon Llewellyn was a voluntary and cordial actor in the work, makes us doubt the propriety of attempting to transform him into a hero. We should rather point to his example to illustrate what we have sometimes heard alleged as an unusual proclivity of parson's sons to fall into disreputable lives.

Death from Chloroform.—A writer in the *Medical Times and Gazette*, states that out of fifty-one cases of death from chloroform, thirty-eight declared their danger by sudden stoppage of the pulse; twenty-five of these showed in addition as

a chief sign, pallor of the countenance. In two deaths the symptoms have occurred thus: Sudden vomiting, instant cessation of the pulse, (food had been taken just before). In six cases, congestion of the face was the most marked symptom. In eight cases, cessation of breathing was the marked symptom. There is only one perfect stimulus to the failing heart, the stimulus of ærated blood. The means for producing this is by the excitation of artificial respiration, the tongue being drawn forward, and the introduction of nitrous oxide, either in its gaseous form, through the lungs, or condensed in water and introduced into the alimentary canal by the mouth or bowels.

The many friends of Dr. Powell will read the following, from the Vicksburg *Herald*, with pleasure:

McPherson Hospital.—No one visits this Hospital without being impressed with the consummate skill and business-like system with which it is managed. It is indeed a cheerful and quiet place for the afflicted. Dr. Powell, the gentlemanly surgeon in charge, is a man pre-eminently fitted for the position. Cleanliness, abundance of ventilation, and systematized management are the attractive features, and evidently enter largely into his ideas of good medical treatment. The wards are spacious, halls airy, with polished floors and high ceilings, and the rows of beds on either side, with their white, clean counterpanes, give to them an air of comfort and quiet rest which is equally attractive to those in health and strength as to the sick and disconsolate soldier.

We visited the hospital not long since, and found about one hundred and twenty sick men, and those in a state of rapid and permanent recovery. The good nursing and pure air will soon restore them to health and strength. It is gratifying to know that we have such a hospital with such a man at its head.

Dr. Alfred Stille has been elected Professor of the Practice of Medicine in the University of Pennsylvania, to fill the chair recently made vacant by the resignation of Dr. William Pepper; and Dr. B. Howard Rand has been elected to the chair

of Chemistry, in the Jefferson Medical College, in the place of Prof. Franklin Bache, deceased.

Philadelphia College of Pharmacy.—Dr. Edward Parrish has been elected Professor of Materia Medica in this school, in place of the late Dr. Thomas.

Tempting Offer.—A man advertises for a competent person to undertake the sale of a new medicine, and adds that it will be profitable to the "undertaker."

The Paris Hospital Medical Society offers a prize of 1,000 francs for the best essay on the following subject: "Establish by means of positive facts the prophylaxis and curability of the form of Meningitis termed 'tubercular.'" To be written in French.

Dr. C. E. Brown-Sequard has returned to this country and taken up his residence in Boston.

The Confederate States Surgeon-General reports 2779 cases of disease, and 1396 deaths among the Union prisoners in Richmond, during the months of Jan'y, February and March last. Of the deaths, 708 were from chronic diarrhœa. This shows a ratio of mortality fearfully large, as compared with the rebel sick in our hands.

The Buffalo *Medical and Surgical Journal* reports two fatal cases of trichiniasis as occurring near that city. A portion of muscle from these persons, and of sausages, such as they had eaten some weeks previously, showed the trichina spiralis in great abundance.

Constipation.—Trousseau declares Belladonna to be the remedy, *par excellence*, for habitual constipation. It does not purge, nor produce loose stools, but only renders defecation easier, and sometimes in the dose of a quarter of a grain, the

extract will produce several stools. As soon as the bowels become regular the dose of the medicine should be gradually diminished. Cases illustrative of the efficacy of this treatment are reported by Feissenger, who, however, made use of suppositories containing the ext. of belladonna; by Blache, also; and by Fleury.

In a late discussion at the Parisian Surgical Society, on amputations, M. Broca observed that statistics proved little or nothing in the matter. Amputations made in Paris and in the provinces were followed by very different results. In the provinces, amputation of the thigh generally succeeds, but in Parisian hospitals it is an operation of extreme danger, death being the rule and recovery from it the exception. Statistics, according to M. Broca, show that the mortality in Paris hospitals, after amputation of the thigh for injuries, is 100 per cent. Trélat makes it 83 in 100 cases.

To Render the Taste of Medicine Palatable.—It has been ascertained by M. Graw that the intensely bitter and nauseous taste of many drugs may be completely disguised by mixing them with chloroform. It is claimed that even the bitter taste of quinia and the peculiar odor of assafœtida can be thus destroyed.

Camp Diarrhœa.—This common and obstinate disease, so little amenable to treatment, has been found by Dr. Davis, of the 34th Iowa Vol., to readily yield to the following formula:

℞. Spir. Ætheris Nit., ℥ iij; Tinct. Opii, ℥ ij; Strychnia, gr. j. M. Give from thirty to forty drops four times a day. A majority of cases yield in 48 hours. So says the Doctor.

Married.—At the residence of the bride's father, in Royal Centre, Ind., by Rev. Wm. Griggsby, Israel B. Washburne, M. D., Surgeon 46th Ind. Vet. Vols., and Miss Mattie A., daughter of G. B. Moore.

BOOK NOTICES AND REVIEWS.

The Principles and Practice of Obstetrics: Illustrated with One Hundred and Fifty-Nine Lithographic Figures from Original Photographs and with numerous Wood Cuts. Hugh L. Hodge, M. D., Emeritus Professor, etc. Philadelphia: Blanchard & Lea. 1864.

When we consider the number of valuable works upon Obstetric science and art which have been issued from the medical press within the last very few years, a doubt may arise in the mind, whether a new work upon this subject was so soon demanded. But when we are apprised of the fact that the eminent author of the work before us was about to retire from the prominent position which he had so long filled with marked ability, nothing could be more proper than that he should leave, as a legacy to the profession, the result of his extensive experience in the department of which he has stood at the head for at least a quarter of a century.

The rare endowments of Prof. Hodge for the task, his long and successful professional career, both as a practitioner and a teacher, led the profession to expect, as the result of his life labor, a work of more than ordinary value, and we have no hesitation in saying, that all who rise from a careful perusal of its pages, will concur in the opinion, that this expectation has been realized.

The work is published in quarto form. A leading feature will strike the reader in the lithographic figures from original photographs which illustrate more perfectly than the ordinary wood-cuts ever did, the anatomy of the parts involved, and the mechanism of labor. The mechanical execution throughout is fully equal to the best work, for which the enterprising publishers are so justly celebrated.

The preface contains a succinct history of Obstetric science in this country, by which we are strongly impressed with the rapid progress which it has made during the last few years. A comparison of the work now under consideration, with the once-valued treatise of Prof. Dewes, will illustrate very well the contrast between the past and the present.

The anatomy of the pelvis, and of the fœtal skeleton, are elaborately and admirably given, and the organs of generation are well described. Many readers will think that more attention given to the description of the formation and early development of the ovum would have rendered the work more complete. The origin of the chorion and amnion is dismissed by a brief paragraph. And the student will be left in some uncertainty whether the author holds the views of Hunter in regard to the formation of the decidua, or those of "most modern physiologists."

The author joins issue with those who believe in "superfœtation," for says the text, "We have no hesitation in declaring that superfœtation in its strict definition never occurs."

Had we space we would gladly give an analysis of the work. In the arrangement there is nothing strikingly novel. We concur most fully in the author's estimate of the paramount importance of a thorough knowledge of the "mechanism of parturition," and consider the large space devoted to its illumination well employed.

The rules for Obstetric operations are clear and explicit. Upon embryulcia we are pleased to read, "In the improved state of the science of Obstetrics at the present time, the necessity of this terrible operation very seldom occurs."

A few extracts taken at random will show the author's style and treatment of certain subjects. Dr. Hodge recommends the Obstetric forceps, not merely as levers and tractors, but also as compressors:

"If," he says, "the head be large or the straits contracted, more pressure becomes requisite; otherwise delivery would be impracticable. How far this compression may be carried with safety to the infant, is a question of great interest; but the solution of it cannot have much influence on our practice, inasmuch as we must be regulated not so much by the idea how much compression can be borne with impunity, but how much is absolutely demanded to accomplish the delivery, for, of course, no more pressure should be made than what is esser-

tial for delivery. It is to be remembered, also, that the injury to the child depends much upon the longer or shorter continuance of this compression, and doubtless, also, on the degree of ossification which may exist in the cranial bones. Moreover, every practitioner is familiar with the wonderful fact, that while the placental functions continue, the brain will bear for a long time great pressure with impunity,

"We know that owing to the moulding of the head by the passages of the pelvis, and the powerful contractions of the uterus, the head may be greatly diminished laterally, and increased in length by the yielding and overlapping of the bones, in many instances, without destroying life, and we know, also, that in many cases where such compression has existed, forceps have effected a delivery, and the child been preserved. In one case of contracted pelvis, where the sacro-pubic diameter measured but little if any more than three inches, the author delivered an infant alive, whose head, a few hours after delivery, measured three inches and ten lines, in transverse diameter. We think, therefore, that the limit to be prescribed to the use of forceps as compressors must be restrained by the necessities of the case, rather than the effect it may have upon the life of the infant; for though that practitioner must be regarded as careless and even criminal who makes more compression than is absolutely necessary, yet he is fully justified in making that degree of compression requisite to effect deliv ery provided there be any reasonable expectation of preserving the life of the child.

"Although, therefore, the child must, in many instances, be exposed to some danger from the use of the forceps as compressors, yet they afford as fair prospect for its safety in bad cases, where otherwise it must have perished, and in most instances they are all important to diminish the sufferings and danger of the parent, with little or no risk to the infant."

The treatment of placenta prævia is perfect rest in bed,hips elevated, head low; a simple and easily digested diet; cold applications to the uterine regions, and warm to the extremities; avoidance of all mental and moral excitement. The following summary gives a good idea of the author's mode of managing placenta prævia:

"The nature of the hemorrhage being ascertained, a soft sponge, dipped in cold water and vinegar, should be applied directly over the orifice of the uterus, and supported by other

portions introduced between it and the floor of the pelvis, or, perhaps, by a gum-elastic bag distended with water. If the hemorrhage should continue and the os remain rigid, the employment of the sponge tent or the internal caoutchouc dilator may possibly be advantageous before more decided ulterior treatment is employed. If, however, the hemorrhage be, by these means, diminished, and the patient's strength is good, the practitioner should wait until the os uteri be dilatable. Then, if the membranes do not rupture, they should be perforated, and the liquor amnii evacuated. If the contractions of the uterus be not powerful, the ergot should be given in repeated doses, while cold applications should be made to the uterus and rectum. If now the bearing-down efforts be efficient, and the perineum becomes distended, the tampon may be gradually removed, and, if necessary, the forceps applied to complete delivery. If the head be too large, or the pelvis small, perforation of the cranium may, in some rare instances, be demanded.

"If, unfortunately, these measures do not sufficiently diminish the hemorrhage, and the patient's strength fails, and the labor cannot be rapidly completed, a still further hope remains by at once extracting the whole placenta, either by means of the hand, or some suitable instrument, so that, if possible, the hemorrhage may be arrested and time gained for the patient's system to react, that delivery may be subsequently effected.

"If it should be ascertained that the presentation is preternatural, the membranes ought not to be ruptured until the os uteri is dilatable, so that version may be accomplished with less difficulty. In such cases, also, unless the necessity be imperative, the artificial abstraction of the placenta should be avoided, as the subsequent operation of version would be more painful and dangerous."

We have examined Prof. Hodges work with great satisfaction; every topic is elaborated most fully. The views of the author are comprehensive, and concisely stated. The rules of practice are judicious and will enable the practitioner to meet every emergency of Obstetric complication with confidence. Having said this much, it is unnecessary to advise the profession in explicit terms to obtain this work.

For sale by S. C. Griggs & Co, Price $13.

The Pathology and Treatment of Venereal Diseases, including the Results of Recent Investigations upon the Subject. By Freaman J. Bumstead, M. D. New and Revised Edition. Blanchard & Lea : Philadelphia.

We are glad to record the appearance of a new and improved edition of the very excellent work of Dr. Bumstead, now three years in the hands of the profession. There is, perhaps, no class of diseases whose proper treatment is a matter of greater moment to the patient than the venereal, and of few has medical literature and medical teaching left us in greater doubt. No writer has done so much as Dr. Bumstead, to clear up this obscurity and relieve the subject from its former confusion. He has made a plain distinction between chancre and chancroid, and teaches that from chancre constitutional syphilis is liable to supervene, but that chancroid ulcers, though contagious, are never followed by such symptoms. As a result of the recognition of this truth follow recommendations of treatment that are highly conservative, and that the experience of the profession has gone far to approve.

His use of mercurials is limited to cases of true syphilis, and never extends to the treatment of chancroid. On this point we quote, "The internal use of mercury has no beneficial influence whatever upon the chancroid, which continues in a state of stubborn persistency, or even progresses, after the system is fully under the influence of this mineral. This statement is not a mere inference from the distinct nature of the chancroid and syphilis, but is founded upon experience. I was fully convinced of the fact by personal observation, and ceased to employ mercury for "soft chancres," several years before the distinction between the two species was recognized. Since abandoning it in my own practice, I have had numerous opportunities of observing other physicians administer mercurials for the chancroid, and my former opinion has only been confirmed."

An indistinct idea once prevailed that mercury was a specific for venereal disease, and this led many to its indiscriminate use, and not only chancre and chancroid, but gonorrhœa

was sometimes treated by ptyalism. Dr. Bumstead's work is so generally and favorably known as to require no praise from us, yet we do not hesitate to add, that on the subjects of which it treats it is by far the best book in the language.

For sale by W. B. Keen & Co. Price $4.50.

The Physician's Dose and Symptom Book, Containing the Doses and Uses of all the Principal Articles of the Materia Medica and Officinal Preparations. By Joseph H. Wythes, A. M., M. D., Author of "The Microscope," "Curiosities of the Microscope," etc. Fourth Edition. Philadelphia: Lindsay & Blakiston. 1864.

The title-page indicates the character and scope of the book. Having rapidly passed to the fourth edition proves the favor which it has received from the profession. Compiled for the assistance of students it is a convenient *vade mecum* for the general practitioner. The following are the contents:

Table of Weights and Measures. Rules to Proportion the Doses of Medicine. Common Abbreviations used in Writing Prescriptions. Table of Poisons and Antidotes. Classification of the Materia Medica. Dietetic Preparations. Table of Symptomatology. Outlines of General Pathology and Therapeutics.

Scanzoni's Practical Treatise on the Diseases of the Sexual Organs of Women.

We have recently been favored, by the Publishers, with a copy of this valuable work. It affords us great pleasure to state that this book is accessible to the American practitioner. It will be found by a perusal that, while the teachings are eminently conservative, the treatise embraces the latest doctrines of the pathology, and the most approved mode of treating the important diseases peculiar to woman. The work is comprehensive; its style concise, rendering it most valuable to the student and practitioner. In every particular it is worthy the celebrated Würzburg Professor.

The American Editor, Dr. A. K. Gardner, has performed his labor well, and in mechanical execution the book is a model.

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ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON "DISEASE."

By J. A. A.

Natura Sanat, Medicus Curat Morbos.

WHAT IS DISEASE?

Disease is a change of structure in parts, tissues, organs, or apparatuses of the system, varying them from the normal (physiologic) constitution.

This change may be in the ultimate molecules only, (at "imperceptible distances"). As the normal metamorphoses of the material parts of the body develop the physiologic actions, or "functions," so do the abnormal metamorphoses develop pathological actions, or "symptoms." But the distinction is quite arbitrary—for as the greater part of the wonderful processes involved in LIFE, occur noiselessly, imperceptibly, and unconsciously, so may those of disease take place without "symptoms" of modified function before death, or apparent variation of the "phenomena of perceptible distance" after death.

Normal metamorphosis of the material gives healthy life—abnormal metamorphosis gives disease.

An Idea to be Abandoned.

That disease ever consists in "perversion of function" without abnormal material change. The symptom "perversion of function" necessitates the presence of material change, visible or invisible, of the part involved—the remote cause of which may oftentimes be found in a distinct visible change in a more or less distant part, even when invisible in the organ whose function is perverted.

Whether the forces mainly impressing the body are "physical" or "vital," it is a plainly demonstrated natural law that their physiologic manifestation requires a physiologic material constitution. *Forces are never diseased!* Material often is.

Paine and the Homœopathists,

respectively, attempt discussion of disease philosophically, and their treatment practically, by imputing everything of disease and everything of remedy to *forces*, nothing to the material through which, only, forces can be manifested. The former (with all Vitalists or Solidists) discusses disease as a metaphysical question, and attacks it, as Milton makes the fallen angels attack their unfallen brothers of incorporeal essence, with very solid cannon of ponderous mass and huge calibre, filled to the muzzle with very palpable gunpowder; whereas the Homœopathist, more consistently, attenuates the material of his attack infinitesimally, seeking thereby to get nearer the ultimate force with which he can reinforce and strengthen the errant force of organization. Hence Paine rattles dry *properties*, like peas in a basket, and the Homœopathist talks about "*potencies*." *Par nobile fratrum.*

General Considerations.

"Out of the fluid," says the elegant and exact Gerber,* "comes the solid, the shapen; all the parts of an animal body were once fluid, they have all been formed from the blood; and after death they will revert to the fluid state again. Organic matter, itself engendered and developed under the influence

*Gerber's "General Anatomy, Text," p. 12.

of the vital force, forms with water a vivifying fluid of different kinds, either homogeneous and more or less consistent, or having numbers of extremely minute and regularly organized molecules mixed with it. This vivifying fluid has the faculty according to the circumstances in which it is placed, of coagulating or solidifying in different ways. The organic matter that is the most highly endowed with vitality separates in a state more or less highly organized, appropriately fashioned, and susceptible of life ever in conformity with the vitality and character of that which is around it, and with or without the solid elementary particles with which it is mingled; it then gradually acquires distinct and individual forms, which always bear appropriate relationship to the structures amidst which the separation takes place."

So far as Physiology can inform us, the "solid and the shapen" come only from the blood and the lymph, or rather the portal blood, the chyle, and the lymph, all ultimating in the formation of BLOOD, perfected by its final passage through the lungs, appearing in the aorta in its grade of highest vitality, or if you please, *capability* of highest vitality.

Abstractly,

we must recognize the *formative force*, a phrase which is one of the landmarks of our present ignorance, to be trenched upon and removed further and further, as knowledge rescues more and more of science from the uncultivated domain of the unknown. It is this force which determines the forms assumed by species and individuals. Resident in the germ, a material substance, unknown, perhaps forever incomprehensible in its essence, nevertheless we know that its developmental energy can never be fully manifested, or even manifested at all, without appropriate supply of appropriate material. Nay, the very germ itself may be wholly blighted by imperfection of the material, or its future development arrested, variously deflected, or *diseased*. Without material pabulum, it may remain quiescent for ages. The kernel of wheat from the wrappings of a mummy, exhibits this force when furnished the

material through which to operate, three thousand years after its fall from the parent stalk.

True, the phases of Force, Heat, Light, Chemical Affinity, etc., must be present, but these can only be evoked through the medium of matter arranged in peculiar forms, so that the proposition remains unchanged: without appropriate material there can be no manifestation of life—form or function.

With inappropriate material there must always be disease Nor is this a matter of merely speculative interest, as too many are disposed to imagine. Philosophically, it brings medicine into the domain of Physical Science; practically, it is hereby emancipated from the supremacy of visionary speculations and dogmas, mystery and charlatanry, into the freedom of a high and certain art. As there is seen something tangible to work upon, there is perceived something tangible to do.

Physiology,

rightly understood, educes order and simplicity from the apparent chaos of manifestations of disease. In its light we are enabled to see that the systematic tables of diseases, with all the involved and inextricably confused attempts at classification, so painfully elaborated by the Nosologists, have no foundation in Nature or fact. The doctrine of diseases as entities which still infects some of our best professional minds, is departing to desuetude. Without becoming believers in the "unity of disease," we can cease to be "Ontologists," substituting for each dogma the solid substratum of physiologic law.

The "Proximate Cause."

The earlier Morbid Anatomists referred the cause of disease to the part showing morbid change in the "phenomena of perceptible distance," that is, to the part which showed change in its color, density, form, etc., but the evidences of modern physiology show that this is a great error. The real change may have been produced in a remote part which, on *post-mortem*, shows not the slightest visual evidence of lesion. "Morbid Anatomy," so-called, is fruitful, mainly, in errors. It is subsidiary mainly to physiology, very little to pathology.

The essential changes of disease are molecular and cellular. The incidental—nay, *accidental*, changes are those which are perceptible on *post-mortem*.

The lungs may show "CONGESTION," but the *disease* be in the KIDNEYS!

Morbid Anatomy, so-called, might indicate that the subject died of Pneumonia, whereas, the real fact might be that he died of disease of the skin, the kidneys, the bowels, the brain or spinal cord!

It will never do to base treatment on such fantasies as these. The real cause of death may be in the food, the air, the water, the stomach, the intestines, the adjuvant glandular tissues, the kidneys, or remote organs. Briefly, the *effect* on particular organs, which the Morbid Anatomist points out, so triumphantly, as illustrating his skill in diagnosis, is a proof of nothing but *ignorance*. You might as well go to the graveyards, and vampire-like, dig up the bodies of the ancient dead and endeavor to show that each died of disease of the part which most speedily and completely showed decomposition.

Briefly, Morbid Anatomy, with its "beautiful illustrations," shows nothing, proves nothing, simply because the ultimate elements of diseases, like the ultimate changes of health, are to be found among molecules and cells, undiscoverable by aided or unaided vision, save in results.

The only approximation to certainty is gained by contrast of the physiological to the pathological. It is probable that the molecules and cells (inseparable in physiological relation,) develop in strict accordance with the conditions in which they are placed. In other words: The individual cell is the type of organic life, and in its changes every function of the most highly developed organization is expressed. To each there are definite conditions of existence in its typical form; that is to say, the cells developing the individuals of each type do so under certain circumstances, *change the conditions and the cells develop different forms, tending to the type of those normally developed under similar conditions.*

When the transformation is consistent with the usual *functions* of the part, it is little noticed but when inconsistent, we recognize disease. That which is the natural or healthy form in one being, developed in another by the equable operation of the same all-pervading laws, involves impairment and even dissolution. Thus the causes of one existence determine cessation of another.

"The Universal Cause
Acts not by partial but by general laws."

We fail accurately to draw the line between health and disease, definitions are at fault, because the differences are but phases of normal organic life. It is, therefore, fitting to view the phenomena of disease with a single, unprejudiced eye; not as the product of marvellous or miraculous causes; not as the means of revenge of wrathful deities, as anciently believed and, even now tacitly admitted by the more ignorant and credulous; not as essential mysteries, locked up forever with the unapproachable arcana of Creative Intelligence, and hence to be combated, if at all, by marvels and miracles, by appeasing charms, by specifics and perturbating methods, by strange influences and fortuitous appliances, but rather as the orderly effect of forces as subject to observation and discoverable as gravitation and affinity, acting upon matter as tangible to examination as the elements of inorganic being, and therefore to be controlled, through the insight which science affords, with as much certainty as we can regulate the reaction of physical agencies upon inanimate objects.

Medicine should no longer be considered *asinus portans mysteria*, but as an eagle, with powerful wing and keen eye, facing unblenchingly the sun of Modern Science.

"BIRD'S" TREATMENT OF PROLAPSUS UTERI.

By W. B. SLAYTER, M. D., of Chicago.

Graduate Royal College of Physicians of England, Royal College of Surgeons of London and Dublin. Late House-Surgeon of Westminster Hospital, London.

One of the most loathsome and troublesome diseases from which a woman can suffer, is Prolapsus Uteri. It not only causes pain and bodily suffering, but makes her life one of misery, and sometimes positively unbearable. Various plans of treatment have been pursued, but in the majority of cases are of no avail. Little can be done except to give temporary relief. The mode of treatment devised by Drs. Golding and Frederick Bird, of London, for the permanent relief of the disease, has been practiced with marked success by the profession in Europe, and deserves the careful consideration of the profession in this country.

The operation consists in returning the Uterus to its natural situation, and then cauterizing the upper part of the Vagina; it is performed in the following manner: The patient first having been placed fully under the influence of chloroform, and the Uterus returned to its natural situation; the walls of the Vagina are widely separated and protected by metal spatulas held by an assistant; a cautery iron having a cone-shaped top about half an inch long, and bent at right angles with the handle, and which has been made red hot, is then carefully inserted into the vagina, and the upper part of the passage around the cervix uteri is gently cauterized, forming an eschar about half an inch wide. A pledget of lint, well oiled, is then inserted, and the patient kept quiet in bed for two or three days. The slough comes away in a short time, the ulcerated surface heals up, and the cicatrix resulting, as is well known, rapidly contracts, and so prevents the Uterus again coming down.

This treatment is, of course, only applicable to those cases where there is no chance of future child-bearing for if the patient became pregnant it would seriously endanger her life, as it would be an impossibility for a child to pass the hard, dense cicatrix in the Vagina.

Many cases have been published in the British Medical Journals, in which the operation has been successfully employed, and several cases which have been under treatment at the Westminster Hospital, and the details of which I have published in the *London Lancet*, fully show the benefits resulting from it. The advantages of the operation are too palpable to require mentioning; it is, however, reasonable to suppose that if the cautery were applied too extensively, and without due caution, serious inflammation and its consequences might arise; but in all those cases which have come under my notice, no serious symptoms of any kind have arisen, and in from ten days to a fortnight the patients have been able to go about, and resume their occupations as usual, without the slightest inconvenience. I have seen several cases a considerable time after the operation had been performed, and they have had no return whatever of the Prolaps.

The two principal points in the operation, to be attended to are, 1st. To see that the walls of the Vagina are thoroughly protected before the cautery iron is introduced, and 2d. That the eschar is not more than half an inch wide, and does not implicate anything but the mucous membrane of the Vagina. The pain after the operation, as a rule, is slight, although in some cases it is considerable, but is readily controlled by the liberal administration of opiates.

In conclusion, I would call on the profession to give this operation their earnest consideration, and in those cases where other remedies have failed, to give it a trial, as I am convinced that in many well chosen cases they will be thoroughly satisfied with it.

PESSARIES.

By M. M. EATON, M. D., of Peoria.

Doubtless no physician, of any considerable experience in the treatment of females, is entirely satisfied with any pessary before the Medical public. Most of those now in use have their friends and advocates, though no one of them is all that is desired; and I think that every philanthropic, well educated physician has been annoyed because no better relief can be afforded to one of the most distressing, though common, complaints to which the female is liable—one so common that we are almost daily consulted about it—one giving rise, not only to suffering, but barrenness, which often so much disturbs conjugal felicity, viz., Prolapsus Uteri.

In order to treat successfully this complaint we must be conversant with its cause, the removal of which should be our first study. In Prolapsus Uteri, the strength of the vaginal walls, the broad and round ligaments, is disproportionate to the weight of the Uterus. This weakness is the result of irritation from various causes in most instances, though occasionally from want of, or entire absence of, irritation. Getting up too soon after confinement, while the vagina is relaxed and the womb heavy, is a frequent cause.

Now, in view of the above facts, it is clearly our duty to reinstate the Uterus *in situ*, retain it there, and strengthen the vaginal walls, while at the same time we support the abdominal viscera with suitable bandages and pads, so as to relieve the womb as much as possible of all superincumbent weight.

On the operation of replacing the organ I will not dwell, as it is generally an easy operation, soon effected by continuous, though gentle pressure on the os uteri with two fingers, having the patient in a recumbent posture, with the hips elevated.

When this is accomplished the patient should not rise for several days, during which time weak astringent washes should be used in the vagina, several times a day, with a rubber syringe, having the patient over a bed-pan the while.

This treatment would effect a cure of itself if long enough maintained, but as patients are restless and impatient of restraint, they will hardly submit to this confinement more than a few days, and as the vagina has not become strong enough to bear the weight of the womb, prolapsus is again the result. To remedy this, various contrivances have been invented to place in the vagina to support the Uterus, all of which, that I have seen or heard of, are to be objected to seriously, in that they simply alleviate but do not cure. Some distend the vagina making it weaker rather than stronger; others irritate the os uteri; others are cumbersome, and have to be removed and readjusted daily. Now, in view of all this, I can agree with Dr. Rigby and others, that these various pessaries have done more mischief than good. But a plan occurred to me some years ago that an instrument could be invented that would answer all the indications, and still liable to none of the objections I have enumerated. I accordingly submit to the Medical profession the following described instrument, hoping it may be found convenient to the physician and a comfort and means of cure to many afflicted daughters of Eve.

The instrument proper is pear-shaped, made of any convenient material, about one and a half inches in diameter, with a cavity, about one inch wide, passing through, and terminating below in an opening, half an inch wide. Around this orifice are inserted three standards which meet externally, and are fastened into a cross piece, placed transversely from before backwards, which divides into two pieces, before and behind, so as to surround the meatus urinarius and the anus, these uniting to form a handle or loop, to which is attached elastic straps passing upward and fastened to a waist band buckled above the hips.

This instrument can be worn indefinitely without removal,

as it does not interfere with defecation or micturition, or with the use of the small pipe of a female syringe, which we need, for several weeks, to continue the cool astringent washes. It does not distend the vagina, it holds the os uteri steady, and will not irritate it. Through the opening in the instrument in which the *Os* rests, the menstrua may be discharged. Hence it seems to me that by the use of this instrument and proper collateral treatment, this distressing malady may be speedily cured, so as to need no treatment whatever. More than this, I believe that this instrument will, after a while, effect a cure of itself unaided, as it keeps the womb *in situ*, and gives time for the vagina to become strong. The old stem-globe pessary only holds the womb up by pressing up between the os uteri and the walls of the vagina. The womb would not rest on it as it has been constructed, and when a dent has been made on the superior surface, it would not hold the womb directly, but simply holds the secretions, and necessitates its frequent removal. It also interferes, much more than my instrument, with defecation and urination; in fact, my instrument interferes seriously with nothing but copulation, which, by the way, it is well to prohibit.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE LIDS.

GENTLEMEN:—Although the lids may be considered simply as organs of protection to the eye, and in themselves scarcely connected with the sense of sight, yet when they are diseased, parts of the eye, vital in importance in the act of seeing, are very liable to suffer. You have already seen many patients, in whom disease of the lids have produced either total or partial loss of vision.

The lids are quite complex in structure. First, there is a very delicate integument, richly supplied with nerves of sensation from the 5th pair. Beneath this is a stratum of cellular tissue, embedded in which are sweat and hair follicles. This layer covers the orbicularis, which is a thin band of muscular fibres, embracing nearly the whole width of the lids. The muscle is thickest near the free edge of the lids. Beneath the muscle is a layer of cellular tissue, quite rich in fat cells. This layer covers the tarsal cartilage, which is especially developed in the upper lid, and which gives firmness and support to it. The lining membrane of the lids has already been described. In the substance of the cartilages are embedded the meibomian glands, which may be seen, on everting the lid, as fine, yellow-colored lines, arranged not unlike certain familiar fern leaves. The minute openings of these glands may be seen along the inner edge of the lids, by the presence of fine drops of secretion pressed out by the effort of turning the lid.

The cilia commence from hair follicles situated quite deep in the lids near the cartilage, and curve upward and forwards in the upper lid, and downward and forwards in the lower lid. They pass through the integument at the outer edge of the lid. At the side of each of the cilia are minute sebaceous follicles, which supply a substance to soften the cilia and the edge of the lids.

All these tissues should be well understood by you. It is important for you to examine, frequently, healthy lids of different individuals and different ages—to observe their thickness, the form of their edges, the relative position of the cilia, the number and size of the folds of skin upon the lids, the position of the puncta lachrymalia and also their movements, whether they close or apen naturally in winking. By doing this frequently you will be able to detect at a glance any abnormal change.

The movements of the lids are influenced by two distinct nerves, a branch of the 3d pair supplying the levator muscle of the upper lid, and a branch of the 7th pair supplying the

orbicularis. A paralysis of the former causes an involuntary closure of the muscle, called ptosis; of the latter, an involuntary opening of the lids. Ordinary winking is not under the control of the will, and yet the will can suspend, for a period at least, the motions of the lids. There seems to be special power of the will over the contractions of the orbicularis, in keeping the lids closed.

The lids not only serve as a covering and protection of the eyes, but also assist in the performance of several important functions. By their motions they distribute the lubricating secretions of the conjunctiva and meibomian glands over the surface of the eye, and at the same time remove dust and undue collections of mucus, which may rest upon the cornea. By the motions of the lids also, the tears, in some way not in all respects well understood, are made to pass more readily into the lachrymal sack and nasal duct, than when the lids are at rest.

As it is impossible in a single lecture to describe minutely all the diseases peculiar to the lids, I shall simply draw your attention to some of the most important principles, which may guide you in the more extended study of the subject. It will be convenient to divide these diseases into three classes, those which are usually secondary to some other disease, as for instance, Trichiasis, Entropion, Ectropion, and Adhesions of the lids at the outer angle, all of which are particularly liable to follow chronic conjunctivitis; those tending to the formation of pus, as Simple Abscess, and Hordeolum; 3d, chronic disease of the sebaceous glandulæ.

Trichiasis is a displacement of the cilia, and is almost invariably produced by the atrophy of tissue, resulting from chronic conjunctivitis. It may also be caused by repeated attacks of inflammation of the sebaceous follicles, near the cilia. Wounds of the lids, involving a loss of tissue in the cartilage and conjunctiva, in healing will sometimes cause a contraction of the parts and turn some of the cilia against the globe. In rare instances, even where no disease is apparent, and where the

eyes in other respects seem normal, one or more cilia will be found growing from the inner edge of the lids, against the cornea. Mere inspection will enable you in most cases to discover the presence of these misplaced cilia. Sometimes, however, the cilia are so fine and white that great care in an examination is required.

The treatment consists in the destruction of the cilia by introducing a needle covered with caustic, down to the follicle of each misplaced hair; in clipping off a portion of the outer tissue of the lid, near the cilia, the cicatrization of the wound being left to turn the cilia from the globe; and finally, in removing the tissue involving the follicles of the cilia, by making an incision parallel to the edge of the lid, down to the cartilage, and dissecting this strip, care being taken to remove all the follicles without injuring the cartilage. Simple evulsion of the cilia with forceps affords but a temporary relief.

Entropion is that condition in which the integument of the lid is turned against the globe. This unnatural position of the lid produces great irritation and pain, which, sooner or later, causes ulceration and final destruction of the cornea. The disease, in its usual form, is produced by spasmodic contractions of the orbicularis muscle, excited by the irritation accompanying conjunctivitis. The reason why some cases of conjunctivitis are attended with irritation and spasm, not in proportion to the apparent severity of the disease, is not easily explained. The under lid, in consequence of the want of firmness of its cartilage is especially liable to entropion.

The operation for this disease in its uncomplicated form is exceedingly simple, consisting merely in excising one or more pieces from the integument of the lid near its free edge. I usually leave the wound without stitches, to heal by granulation. The contraction produced by cicatrization restores the lid to its natural position. As soon as the wound has sufficiently healed, treatment should be directed to the primary disease. There is scarcely a minor operation in ophthalmic surgery attended so often with satisfactory results as this.

Care should be taken not to remove too much tissue, since the edge of the lid may thus be drawn too far from the globe. Whenever Entropion is complicated with Trichiasis the prognosis is generally less favorable. Although a suitable operation may much improve the condition of the eye, the hardened contracted edge of the lid will often remain a source of irritation.

Ectropion is a disease, usually of the lower lid, in which the conjunctiva is turned from the globe, and exposed to direct contact with the air. It is more frequently a serious disease than Entropion, and may be produced by several conditions of the lids. Total or partial paralysis of the orbicularis muscle may cause it, by permitting the lower lid to fall away by its own weight from the globe. The presence of granulations and hypertrophy of the conjunctiva, by separating the edges of the lid from the globe, gradually tends to produce it. The excoriations of the skin, and consequent loss of tissue and contractions, produced by the presence of abnormal discharges from the eye, is an occasional cause of the disease. The same effect is produced by certain wounds, burns, abscesses, and erysipelas.

The exposure of the conjunctiva and of the cornea to the air, the constant flow of tears upon the cheeks, caused not only by this exposure, but also by the eversion of the punctum, which prevents the tears from passing into the nasal duct, not only render this disease very annoying but, sooner or later, totally or partially destroy vision.

As a satisfactory discussion of the surgical treatment of this disease requires more space than we can at present give, we would refer the readers of the *Journal* to works general surgery as well as those on diseases of the eye.

Chronic Conjunctivitis produces, not unfrequently, by the presence of acrid discharges, excoriations of the edges of the lids at the outer angles. The denuded surfaces thus tend to unite, reducing the length of the palpebral fissure, The irritation of the primary disease, augmented by the abnormal

pressure of the contracted lids upon the globe, is increased by spasm of the orbicularis. This condition may be improved in connection with appropriate treatment directed to the primary disease, by making a horizontal incision through the thickness of the lids, at the external angle, thus restoring the palpebral fissure to its normal length. The insertion of two or three vertical stitches, embracing nearly the whole width of the orbicular muscle, will also assist in overcoming spasm and tendency to entropion. The stitches should be drawn quite tight and left to slough out.

Abscess of the lids, whether caused by the inflammation of the minute sebaceous follicles or otherwise, is of comparative little importance, since the tending is almost invariably to recovery without special treatment. And yet there are a few practical points for you to bear in mind. Simple abscess in or near the lids should be treated as abscess in other parts of the body. Hordeolum—sty—is merely suppurative inflammation of the sebaceous follicles. Although it generally requires scarcely any treatment, occasionally there is a long-continued and obstinate tendency to the formation of these abscesses—as in certain cases of repeated occurrence of boils, and treatment seems of little avail. In some of these obstinate cases the use of poultices applied to the lids for a few moments, several times a day, rubbing to the edges of the lids at night a little red precipitate ointment, gr. xvj to the ounce, will prove beneficial. The use of alkalies, in the form of Seidlitz powders, or Rochelle salts, sometimes seems to act favorable. It is well to remember that, now and then there are cases, in which the earliest symptoms are œdema of the conjunctiva, as well as of the lids, presenting the appearance of severe conjunctivitis, and still the disease may be a simple sty, the opening of which at once relieves the œdema. Of course the application of caustic astringents would be worse than useless.

There is another form of abscess, which you will occasionally observe, caused by obstruction and inflammation of the [illegible] glands. Usually, however, the disease tends to

the formation of cystic tumors, which is of a very slow growth and is filled with an abnormal secretion of the glands.

The tumor may tend to grow at the expense of the tarsal cartilage and conjunctiva, thus forming an elevation upon the inner surface of the lid, or it may press outwards, the tumor appearing upon the outside of the lid. There is but little pain attending the growth of these tumors, although they occasionally become painful and suppurate.

The most reliable treatment consists in opening the tumor and removing as much of the cyst, with its contents, as possible. It may be necessary, sometimes, to destroy portions of the cyst that may remain, by introducing into the wound small portions of nitrate of silver.

Chronic Inflammation of the sebaceous follicles of the lids is quite a common and obstinate disease. It is characterized by the presence of a yellow, hardened secretion upon the edge of the lids, around the base of the cilia. It may involve the whole extent of both lids, or be confined to a few cilia of either lid. A large number of these cases seem to depend upon a scrofulous diathesis. The disease is one of considerable importance, for, although its progress is usually slow, even continuing for years without much change, it is very liable, if neglected, to result in serious injury of the lids.

The irritation produced by the presence of the dried secretions and by the inflammation of the follicles, is extended to the conjunctiva. The disease seems, sometimes, to include an eczematous condition of the edge of the lids. The constant inflammation of the sebaceous follicles, extending to the hair follicles, either tends to destroy the cilia, or to displace them, as in trichiasis. In other cases the inflammation produces great infiltration and hypertrophy of the lid, so that it presents a forbidding appearance, the edge being red and thickened, some of the cilia being totally destroyed, and others being displaced, as in trichiasis. The conjunctiva is also usually inflamed.

The treatment, to be most successful, should be commenced

in the early stage of the disease. As the patients often present symptoms of a scrofulous diathesis, particular attention should be paid to the general health. In such cases, pure air, nutritious diet, cod liver oil, iodide of potash, and sometimes, minute doses of bichloride of mercury, are especially indicated. Locally, the eyes should be kept clean during the day, by poultices of starch or slippery elm, applied for a few moments several times a day. During the intervals, the lids should be kept free from collections of secretion by rubbing the edges of the lids with any simple ointment.

Every night an ointment of red precipitate, gr. x—xx to the ounce, should be carefully applied to the edge of the lids. I have found in some obstinate cases that a strong solution of nitrate of silver, ʒj to the ounce, applied by means of a fine camel's hair pencil, to the base of the cilia, will prove beneficial. Tincture of iodine applied in the same way is often very effectual. Great care is required that these last mentioned remedies do not enter the eye.

Clay as an Application to Ulcers.—Dr. Schreber, Leipsic, recommends the use of clay as the most innocent, the most simple, and the most economical of palliative applications to surfaces yielding foul and moist discharges. He moreover considers that it has a specific action in accelerating the cure. Clay softened down in water, and freed from all gritty particles, is laid, layer by layer over the affected part to the thickness of about a line. If it becomes dry and falls off, fresh layers are applied to the cleansed surface. The irritating secretion is rapidly absorbed by the clay, and the contact of air prevented. The cure thus goes on rapidly. This clay ointment has a decisive action in cases of fœtid perspiration of the feet or armpits. A single layer applied in the morning will destroy all odor in the day. It remains a long time supple, and the pieces which fall off in fine powder produce no inconvenience.—*Dublin Medical Journal.*

SELECTED.

A NEW METHOD OF TREATING DISEASE BY CONTROLING THE CIRCULATION OF THE BLOOD IN DIFFERENT PARTS OF THE BODY.

By JOHN CHAPMAN, M. D., M. R. C. P.

It has long been known that the sympathetic nerve, called by Bichat, the nervous system of organic life, presides over those processes by which the body is developed and sustained. It stimulates and controls the action of the heart, alimentary canal, genito-urinary organs, and all those processes of growth, repair, and removal of *effete* materials on which the continuous vitality and health of the animal organism depend. During recent years, important additions to our knowledge of the functions of the sympathetic nerve have been made, chiefly by Prof. Claude Bernard and Dr. Brown-Séquard, especially with reference to its power of controlling the action of blood-vessels, or what have been termed its vaso-motor functions. But as the sympathetic and cerebro-spinal systems are intimately related, and, indeed, in some parts, inextricably and indistinguishably blended, both in structure and function, the nervous influence, whether healthy or not, which is exerted over the several organs of the body, is two-fold; hence, when that influence becomes abnormal, either in kind or degree, the most potent method of restoring it to its healthy condition, would be by a dual action at once on the sympathetic and cerebro-spinal nervous systems. The physician who acquires the power of directly controlling these great controllers of the organic functions would immediately obtain the mastery over a large number of diseases. I scarcely dare write the words, "I have done this"—so momentous are they if true; and yet I believe I have.

I have discovered that a controlling power over the circulation of blood in the brain, in the spinal cord, in the ganglia of the sympathetic nervous system, and, through the agency of these nervous centres, also in every other organ of the body, can be exercised by means of cold and heat applied to differ-

ent parts of the back. In this manner the reflex excitability, or excito-motor power of the spinal cord, and the contractile force of the arteries in all parts of the body can be immediately modified.

In order to lessen the excito-motor of the spinal cord only, I apply ice, in an India-rubber bag about two inches wide, along that part of the spinal column containing the part of the cord on which I wish to act. On the same principle, the vitality of the spinal cord may be increased by applying hot water and ice alternately, each in an India-rubber bag, if very energetic action be required; if less vigorous action be necessary, I apply ice, or iced water only, using it several times a day, for a short time on each occasion, with a long interval between each application.

If it be desirable to increase the circulation in any given part of the body, this I have found myself able to effect by exerting a soothing, sedative, depressing, or paralyzing influence (according to the amount of power required) over those ganglia of the sympathetic which send vaso-motor nerves to the part intended to be acted on. This influence may be exerted by applying ice to the central part of the back, over a width of from four to four and a half inches, and extending longitudinally over the particular segments of the sympathetic and of the spinal cord on which it is desired to act.

For example, intending to direct a fuller and more equable flow of blood to the brain, I apply ice to the back of the neck and between the scapulæ; increased circulation and warmth of the upper extremities are induced in the same way; the thoracic and abdominal viscera can be influenced in like manner by application to the dorsal and lumbar regions; while the legs and the coldest feet ever felt can have their circulation so increased that they become thoroughly warm, by an ice-bag applied to the lower part of the back.

The bags I use are of different lengths; of the width already named for adults, and of lesser widths, of course, for children. I have had them made both of India-rubber, and of linen with a surface of India-rubber upon it: the former are the best. The width of the bags is equal throughout, except at the opening, which is narrowed to facilitate tying, and elastic to admit easily the lumps of ice. When the bag is full, I divide it, if a long one, into three segments; this can be done by constricting it forcibly with a string; the ice of the upper part is thus prevented from descending, as the melting goes on, into the lower part of the bag. I am preparing a bag on

a new principle, which will be a great improvement on those I now use; but as it is not yet complete, I abstain from describing it here. I sustain the bag in the position intended by means of ribbon or tape passed through loops at the back of it, then over the shoulders, and round the body.

Theoretically, I feel assured that by the methods I have described physicians will be able to control the great majority of diseases; experimentally, I have received numerous and wonderful proofs that this assurance is well founded. By thus acting, by means of cold or heat, or both alternately or combined, on the spinal cord and ganglia of the sympathetic, I have succeeded in completely arresting the fits of many epileptics, and in curing the following maladies:—Paralysis, long continued and extreme headaches, prolonged giddiness, extreme somnolence, a feeling of want of firmness in standing and of security in walking, habitual hallucinations, loss of memory, weakness and dimness of sight, ocular spectra, inequality of the pupils, lateral anæsthesia, incontrollable spasmodic opening and shutting of the mouth, cramps of the limbs (in two cases of the hands, incapacitating the patients to continue their work), numbness of the fingers, incapacitating the patient to pick up small objects, or to use a needle, paralysis of the bladder, incapacity to retain the urine more than a few minutes (two cases recovered to a surprising extent), profuse and too frequent menstruation, scanty and irregular menstruation, extreme menstrual pains, profuse leucorrhœa, with long continued bearing down of the womb, and extreme pain of the back, habitual constipation, habitual diarrhœa, general coldness of the surface of the body which has continued for many years, habitually and hitherto irremedially cold feet.

For the sake of brevity I abstain from discussing here the applicability of the method above described to the several diseases which the physician is called upon to treat; but as many cases of paralysis and a very great majority of cases of epilepsy have hitherto proved incurable, I will in respect to these diseases, and especially in respect to epilepsy, make a few observations, and give the briefest outlines of a few cases, showing the results of my method of treating the last-named disease.

To cure paralysis primarily originating in a lesion, not of the brain but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of its distribution of its vaso-motor nerves throughout the paralyzed limb;

to how slight an extent this has hitherto been possible, either by internal medicines or external applications, is too well known to need description here. Assuming the general truthfulness of the doctrines of Messrs. Kussmaul and Tenner, Schroeder van der Kolf, and of Dr. Brown-Sequard, respecting the essential nature of epilepsy, or the proximate cause of convulsive affections generally, we must become still more deeply impressed with the conviction of the necessity of influencing both the cerebro-spinal and the sympathetic nervous system, in order to exert any lasting curative power over that remarkable group of maladies. In Messrs. Kussmaul and Tenner's general summary of the results of their investigations concerning the nature and origin of epileptic convulsions, they say:—"It is probable that certain forms of epilepsy result from a spasm of the muscular coats of the cerebral arteries," and elsewhere they observed that if so, "the central point from which these (spasms) arise would consequently lie in the part from which the vaso-motory nerves take their origin, and therefore, if the result of Schiff's researches be correct, in the medulla oblongata. An excitement of this nervous centre would then be the first link in the chain of these processes, anæmia of the brain the second, and the epileptic attack the third." Dr. Brown-Sequard, in his "Researches on Epilepsy," after giving his reasons for thinking that "Epilepsy depends in a great measure on an increased reflex excitability of certain parts of the cerebro-spinal axis," proceeds to account for the successive phenomena of an epileptic attack, and, referring to one of the first of them—the paleness of the face—remarks, "We consider it a most interesting symptom, as it leads to a very probable explanation of the loss of consciousness in epilepsy. After Prof. Claude Bernard had discovered that the section of the cervical sympathetic nerve is followed by a dilatation of the blood-vessels of the face, I found that when this nerve is irritated by galvanism there is a contraction of these blood-vessels, and I explained the facts discovered by the eminent French physiologist and myself, by considering the sympathetic as the motor nerve of the blood-vessels of the face. I found, also, that the branches of the sympathetic nerve which animate the blood-vessels of the face, originate from the spinal cord with the branches of the same nerve going to the iris. When the excitation takes place in the spinal cord and the basis of the encephalon which gives rise to the fit, the nerve-fibres which go to the head are irritated, and produce a contraction of its blood-vessels. Of course this contrac-

tion expels the blood, and in consequence the face becomes pale. We think that at nearly the same time, when the origin of the branches of the sympathetic nerve going to the blood-vessels of the face receive an irritation in the beginning of a fit of epilepsy, the origin of the branches of the same and other nerves, going to the blood-vessels of the brain proper, also receive an irritation. A contraction then occurs in these blood-vessels, and particularly in the small arteries. This contraction expelling the blood, the brain loses at once its functions, just as it does in a complete syncope."

Though Prof. Schroeder van der Kolf differs somewhat from Messrs. Kussmaul and Tenner, and Dr. Brown-Sequard, in maintaining that the abnormal changes constituting the proximate cause of epilepsy, are more exclusively restricted to the medulla oblongata than is believed to be the case by those investigators, yet all these distinguished pathologists agree in recognizing the very important part performed by the vaso-motor nerves in producing an epileptic fit; and, though they differ as to the relative frequency of the cases in which the medulla oblongata is the primary seat of the attack, they also agree that it is very often the originating centre of the malady. It may, therefore, be stated that they all concur in the opinion that the proximate cause of epilepsy is two-fold, viz., an undue reflex excitability of the medulla oblongata, and an undue irritability of those branches of the sympathetic nerve which are distributed to the cerebral arteries, and which, in their abnormally excitable condition, induce spasmodic contractions of the cerebral blood-vessels, and the consequent loss of consciousness and fall, which usually usher in an epileptic fit. I agree with Dr. Brown-Sequard in believing that different segments of the spinal cord, as well as the medulla oblongata, are not infrequently the primary seat of epilepsy; indeed concerning the pathology of epilepsy, there is, so far as I know only one point in which I differ from that profound physiologist and skillful physician, under whose guidance, at the Hospital for Diseases of the Nervous System, it has been my good fortune to study. It is true that that "one point" is an important one, since, by diverging in the direction I have taken, I was led by a logical process to conceive of the method of curing epilepsy, which, when months afterwards, I was enabled to put it to the test of experiment, realized my sanguine expectations. For the sake of brevity, however, in this preliminary statement, I shall avoid discussing the point referred to. My immediate object in touching on the pathology of epilepsy

at all at present, is merely to show that while, as I have said, "to cure paralysis primarily originating in a lesion, not of the brain, but of the spinal cord, it is necessary to exert a curative influence, not only over the spinal cord, but also over the sympathetic nervous system, to the extent of the distribution of its vaso-motor nerves throughout the paralyzed limb," so, in a like manner, to cure epilepsy it is necessary to exert a curative influence not only over the spinal cord, including the medulla oblongata, but also over the sympathetic nervous system to the extent of the distribution of the vaso-motor nerves throughout the encephalon.

In treating paralysis according to the method above described, my first effort is directed to the spinal cord, which I endeavor to restore to a healthy condition by increasing or diminishing the circulation of blood in it. I effect either of these results by directly modifying its temperature. Moreover, as fibres from the ganglia of the sympathetic are distributed to the sheaths and blood-vessels of the spinal cord, it can be influenced by cold and heat, not only directly, but indirectly, by acting on those ganglia. The restorative power which I have been able to exert in this manner is truly surprising, and I believe quite unparalleled by any influence ever exerted by medicine.

If the paralyzed limb be cold, my next object is to increase the circulation in it; this I do, as already said, by lessening the vaso-motor power of those ganglia of the sympathetic which preside over the blood-vessels of the limb in question. In this manner I find that the circulation in it can be so increased as to make it even very unpleasantly hot.

The health of the spinal cord having been improved, and the circulation and consequent nourishment of the paralyzed limb having been adequately increased, I then, and not until then, apply galvanism to the paralyzed muscle, if this aid seems needful. When thus applied, after the cord and limb have been acted on as described, the affected muscles prove far more rapidly responsive to the galvanic stimulus than paralyzed muscles usually are, and recover their natural size and strength with proportionate rapidity. But in fact, such is the health-giving influence of the processes I have described, that the limb will generally recover its healthy condition without the use of galvanism at all.

The treatment thus described has reference to those forms of paralysis originating in a lesion of the spinal cord; but I have found myself able to exert a curative influence scarcely

less potent even when the paralyzing lesion is within the skull and certainly far more so than can be exerted by any internal remedy.

I could support these statements by several illustrative cases, but shall only venture to extend this paper by giving a few facts in evidence of the power over epilepsy, which my method of treatment places within the reach of the physician.

In order to cure epilepsy, care must of course be taken in the first place that all sources of eccentric irritation be removed, assured of this, as far as possible, I direct all my efforts to accomplish two objects—first, to lessen the excito-motor power of the spinal cord, by lessening the amount of blood circulating in it; and, second, to prevent those spasmodic contractions of the cerebral arteries which induce the sudden loss of consciousness constituting the first phase of an epileptic fit. To achieve these objects, I order—

First, and most important, ice to be applied to some one part or to the whole length of the back, and from two to eighteen hours a day, according to the special character of the case under treatment.

Secondly, if the extremities be cold, to aid them in recovering their wonted warmth during the first day or two of treatment—by frequently immersing them in hot water, and by friction, also in winter, by clothing the arms down to the wrists, and the legs down to the ankles, in flannel.

Thirdly, as auxiliaries, (1) to take abundant physical exercise, and to use dumb-bells when practicable, or other special means of increasing the respiratory activity and of expanding the energy of the spinal cord; (2) so to cut or dress the hair that it shall not cover or keep warm the upper part of the back of the neck; (3) to exercise the brain daily and systematically in some healthy study, or, if this be impracticable, to ensure regular mental activity by means of some interesting employment; and (4) to take care that the dress along the centre of the back be light and cool.

If ice be properly applied to the back, the extremities, however cold, may be made quickly warm, so that in many cases the use of hot water may be wholly dispensed with; but in severe cases, where immediate derivation of the blood to the extremities is urgently required, and more especially in winter, it is expedient to accelerate the influence of the ice applied to the sympathetic ganglia by the means just indicated.

The results of this method of treating epilepsy are exemplified in the following cases:—

Case 1.—A man, aged 42, began to have fits in 1854. During the twelve months previous to the beginning of my treatment (May 16) he had on an average, three fits of about twenty minutes' duration daily; since I began to treat him he has not had a single fit.

Case 2.—A girl, aged 17, began to have fits when between 13 and 14 years old. Has been accustomed since that time to have two little fits (*le petit mal*) daily. I began to treat her February 24, 1863. These little fits immediately became less pronounced, then having gradually lessened in number, ceased entirely at the end of the first week, and have never recurred.

Case 3.—A girl, aged 14, has had fits, chiefly little ones, for about six years. She becomes unconscious in each fit, but does not fall down. When I began to treat her, (April 23, 1863,) she was having fits at the rate of about four in each hour during the day, besides several each night. Each fit lasted from three to five minutes. The night fits ceased entirely in the middle of May, and the day fits, which now do not last above two or three seconds of time each fit, have declined at the following rates:

Total number of fits during the week			ending May 1,	50
"	"	"	" 8,	65
"	"	"	" 15,	47
"	"	"	" 22,	37
"	"	"	" 29,	26
"	"	"	June 5,	11
"	"	"	" 12,	10
"	"	"	" 19,	8
"	"	"	" 26,	5
"	"	"	July 3,	6
"	"	"	" 10,	2

Note.—During the week ending May 8, the patient suffered much from toothache, and at length had two teeth drawn. Hence, I believe, the fact that she had more fits that week than the previous one.

Case 4.—A girl, aged 20, suffers from falling fits of the ordinary kind, lasting about three minutes each, from little fits, which she calls her "jerks," and in which she becomes unconscious, but does not fall down, and from a frequent quivering of the lips, which is a serious impediment to speech. Of the falling fits she usually has a large but uncounted number each month. In April last she had them continuously one after another throughout each day during a week. Of her little fits or "jerks," she usually had ten in each of the six days of her catamenial period, and one during each day of the inter-

val. The quivering of the lips is a constant trouble. I began to treat her May 27; since that time she has had one falling fit, lasting about three minutes, and two lasting but an instant each; and since June 15, excepting one little "jerk," without losing consciousness, she has had no jerking fit, no quivering of the lips, and no abnormal symptom whatever.

Case 5.—A boy, aged 13, during the last twenty months has suffered from falling fits, and what his mother calls "stagnation fits," in which he becomes unconscious, but does not fall. On an average he had, until I began to treat him, about fifty of each kind of fit during each month. He came under my care June 4. Since that date he has had only one falling fit, which was induced by his brother, who made him angry, and has had no little fit whatever.

Case 6.—A boy, aged 14, in the habit of having an average of twelve fits daily, each preluded by a shriek. I began to treat him June 11. On that day he had four fits, but each of them without a shriek. Since that day he has not had a single fit.—*Medical Times and Gazette.*

DISLOCATION OF THE HIP JOINT

SUCCESSFULLY REDUCED BY MANIPULATION FIVE MONTHS AND A HALF AFTER THE ACCIDENT.

By J. NEWTON BROWN, M.D., San Jose.

The subject of this paper was suggested by a case which came under my care while acting as one of the attendant physicians to the Infirmary of Santa Clara County, and on account of the success which attended an operation usually considered impracticable in such cases, I have thought it worthy of being reported.

Horatio N. Grant, aged 56, sanguino-nervous temperament, vigorous constitution, and in good health, was admitted to the Infirmary for an injury of the hip, which he had received five months and fifteen days previously, by being knocked down and run over by a horse. Upon examination it was found that the right femur was dislocated into the thyroid foramen, the hip was flattened, trochanter major depressed, the limb everted, abducted, and one and a half inches longer than that of the sound side. He walked with a cane, but was unable

to use the limb in any manner which would necessitate motion of the thigh, except in a lateral and semicircular direction. He had been examined shortly after receiving the injury, by a physician, who he said "pulled at the limb and gave him some liniment." He had afterwards remained in bed about three weeks, receiving no further attention, and finally, after much suffering in traveling from place to place on foot, came to the Infirmary in the condition above described. A careful examination proved that the bone was exceedingly immovable except in one direction—viz: slight abduction, with very limited rotation, and that not without giving great pain. Taking into account the excellent physical condition of the patient, I determined to attempt reduction by manipulation, believing that if I failed in this, I could at least increase the mobility of the limb.

The patient was placed under the influence of chloroform, and when fully anæsthetized it was found that although the bone admitted of slight motion, it seemed to resist any efforts at flexion or adduction; and fearing, from the extent and firmness of the adhesions, that any attempt at reduction might result in serious laceration, I had almost determined to desist from further interference, but having been so earnestly solicited by the patient to undertake any thing, however hazardous, which might afford any chance of relieving him, I determined if possible to break up the adhesions, hoping that at least greater usefulness of the limb would be acquired. Flexing the leg upon the thigh, and placing my breast against the knee, I gradually threw my weight upon the knee joint, using the femur as a lever, and had the satisfaction of feeling the limb gradually move towards the patient's body, the adhesions giving way with quite an audible snapping and tearing sound. The manipulations were continued about ten minutes, and the mobility of the thigh greatly increased, but as there were still powerful muscular contractions, which seemed to increase with every movement of the femur, I placed the limb again in a horizontal position, and discontinued the manipulations. When the patient came from under the influence of chloroform, morphiæ acetas, and antim. et potass. tart. were administered, and cold lotions constantly applied to the hip. I was surprised the next morning to find that little, if any, constitutional disturbance had been produced, and the patient expressed himself as feeling quite comfortable. I now felt sanguine of being able to reduce the dislocation, and only feared adventitious deposit in the acetab-

ulum. On the day following, chloroform was again administered, and the manipulations commenced as before. The adhesions continued to give way, and in twenty minutes the mobility of the limb was as great as could be attained from the unnatural position of the head of the bone. I now flexed the leg upon the thigh, and the thigh upon the pelvis, very slowly and cautiously carrying the knee over to the sound side and then across the abdomen, at the same time using considerable force in order to keep it as near the body as possible, and at this stage of the process the luxation was converted to the dorsum of the ilium; the limb was shortened, the toes inverted and resting upon the instep of the other foot. On making a second attempt, when I had arrived at this stage of the process when the knee was nearly on a line with the injured side, I abducted it gently, turned the toes outwards and the heel inwards, carrying the *foot* across the sound limb, making at the same time gentle oscillations of the thigh when the head of the bone slipped into the acetabulum, the foot came down and the deformity was removed. The feet were confined together, the limb bandaged, a full anodyne given, and with subsequent treatment in the way of light diet, evaporating lotions, &c., in three weeks the patient walked out into the yard with a cane, and in nine weeks from his admission to the Infirmary he was discharged cured. I have seen him since, nearly a year subsequent to the operation, and he walks as well apparently as any one: in short, is perfectly well. This case is interesting on account of the time which had elapsed previous to the operation, and as showing the practicability and superiority of "Reid's Method," as compared with the pulleys.

Dr. Reid's directions are as follows:

"Let the operator stand or kneel on the injured side, seize the ankle with one hand, the knee with the other, then flex the leg on the thigh, next strongly adduct it, carrying it over the sound one, and at the same time upward over the pelvis, by a kind of semicircular sweep, as high as the umbilicus; *then abduct the knee gently*, turn the toes outwards, the heel inwards, *and carrying the foot across the opposite and sound limb making gentle oscillations of the thigh*, when the head of the bone will slip into its socket."

Reid's method, in common with all improvements in surgery, has had its opponents, yet among those who have really investigated it, there are few who condemn, and many who award the praise which its merits deserve. Hamilton collect-

ed sixty-four cases in which it had been successful, and in sixteen of these cases manipulation succeeded after extension had failed. I have seen it resorted to in seven cases, varying in duration of time after the injury—from a few hours to 5½ months—and in every instance with favorable results. Three of these cases were on the dorsum of the ilium, two on the pubes, one in the ischiatic notch and one in the obturator foramen. One of these patients was 63 years old, the youngest about 36.

We do not wish to be understood as claiming infallibility for this method of reduction, for we will sometimes fail in reducing a dislocation of the hip, in spite of all our endeavors, either by traction or manipulation; but we do claim that all reducible cases can be successfully treated by Reid's method. The question comes in here—as to when, and under what circumstances, we should attempt reduction at all—this is a matter for the surgeon to decide.—*Pacific Medical and Surgical Journal.*

CLINICAL LECTURE ON DIPHTHERIA.

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LECTURE II.

I have said* that, as a rule, the paralysis following diphtheria is prone, by its natural history, to terminate in cure. This we may confirm and expedite by the use of digestible, nutritious food, by the administration of tonics, by friction and kneading of the paralysed parts when practicable, and, occasionally, by the aid of the galvano-electric current It is well understood that pure air and proper exposure to sunlight are not to be omitted.

I think highly, among the tonic remedies, of the syrup of the phosphates, or what it has been fashionable with some to call chemical food. It is readily taken, agrees well with the stomach, and gives us all the results we should, *à priori*, expect from its composition.

* June number, page 272.

Among tonics of the vegetable class, I prefer strychnia to any other. I do not know that it is better than nux vomica in itself; but the invariable composition of the pure alkaloid or its salts enables us to regulate the dose with perfect accuracy.

I usually write for—Strychniæ, gr. j. Acid. Nitric. Dilut. f. 3 j. Aquæ f. 3 vij. M.

Each minim of this solution contains the one-four-hundred-and-eightieth part of a grain of the salt. To a child of three years I would give from three to five drops in a desertspoonful of water, three times a day.

The beneficial effects from change of air and sea-baths are not less strongly marked in convalescence from diphtherial paralysis than from other adynamic conditions.

The treatment I have thus indicated, gentlemen, is not complicated. It is easy to remember, and I believe embraces nearly everything that is essentially necessary.

As this lecture is intended to anticipate certain questions from you, after graduating, concerning diphtheria, which I would otherwise have put to me by letter, it may not be amiss to say what should be done with regard to your conduct at the breaking out of an epidemic.

You will at once be asked as to *the cause* of the visitation. There is scarcely anything on which the non-professional public insist more strongly, than that a doctor should be able to explain *the reason why* such epidemics prevail. Honesty is the best policy in such cases. Say what is true, "I don't know." Avoid the unwholesome practice of telling people that it is owing to an animal having been drowned in some neighboring pond, from which water is supplied; that it is because the flour or other bread-making material was bad; that the wind blew from some particular quarter; that foolish virgins had put bad oil in their lamps by which the patients read or worked, or the like. We are in ignorance, thus far, of the cause which calls into existence most epidemic diseases. Let us, whilst confessing our darkness, strive and hope for light. As yet it has not been willing to shine on us in such a way as to let us see the reason of diphtherial visitations.

Every one who has had much dealing with diphtheria will recognise the practical wisdom of Dr. William Jenner's division of the disease. It is as follows:

1st. The mild form, in which there is little or no constitutional disturbance, with little or no trouble or pain in swallowing. Albumen is not found in the urine of these cases,

which are recognised as diphtherial, by the epidemic prevalence of the disease, and by the patches of exudation revealed by inspection of the fauces or other parts affected.

2d. The inflammatory form. In this, symptoms and signs of more or less severe facial inflammation precede the membranous development; intense injection of the submucous cellular tissue, producing, at times, marked œdema. Febrile action, with great quickness of pulse, is a constant accompaniment of this form.

Doctor Jenner also speaks of the nasal, the laryngeal, the asthenic, and the insidious varieties. They are due simply to certain peculiarities, explicable by their names, and need not detain us longer in their consideration. They will be mentioned again when we come to speak of prognosis. A question which you must be prepared to answer from your patients is, "Doctor, shall I separate the sick child" (for it occurs so much more commonly in children) "from those who are well? Is the disease contagious?"

The usual dissidence among authors as to its contagious nature exists. I advise you very strongly, where it is practicable, to isolate the sick member of the family, and to encourage the removal of the others to some place where the disease does not prevail. If we could be sure that the individual instance was entirely sporadic, it might be proper to give other advice; but, unfortunately, we have too much evidence of its tendency to desolate certain localities, to be able to regard it as otherwise than of epidemic type. You would not hesitate to advise the removal of well people from New Orleans during a visitation of yellow fever, nor from New York whilst cholera prevailed. No more should you hesitate to advise your patients to take their healthy children away from a neighborhood scourged by diphtheria. Setting aside the question of contagion, you are still bound to give the advice indicated. Nor must you forget how the famous French physician Valleix, and our own talented and lamented Dr. Frick, of Baltimore, contracted fatal diphtheria by applying their mouths to the wounds made in tracheotomizing patients threatened with death from suffocation from the laryngeal variety.

The letters I receive from my old friends of former graduating classes almost always indicate anxiety on two points: firstly, what to say in a prognostic way; and, secondly, what it is best to do therapeutically.

Some of those now listening to me have seen with their

preceptors many cases of the disease which now occupies us. They have had varied experience. With some the mortality has been very great; with others scarcely any cases have been lost. With nearly all, the greatest number of deaths have occurred at the commencement of the epidemic. This, you know, is observed as a law of these visitations, whether they be of cholera, yellow fever, typhus, dysentery, or what not. Nor is it difficult of explanation. In the earlier days of its prevalence, those most predisposed are those least able to resist the morbific influence. Moreover, this latter seems to grow weaker, to exhaust itself, with time.

As to the other point, why some should be led to think it a disease of little gravity, and others of the most dangerous nature, that is simply owing to the *type of disease* they have encountered. Don't be misled by believing it due to the peculiar excellence of the treatment pursued. I know no better exemplification of what I mean than by referring you to the statistics of enteric fever, as seen in the Massachusetts General Hospital. H re there was the same disease, nosologically speaking; the same treatment prevailed; the hygienic conditions were of the best; the same able men, and of their great ability we can all come up as cheerful witnesses; and yet the mortality indicated was as follows: "In the year 1830, the deaths were one in three and a half; in 1831, they were one in fourteen and a half; and in 1829, one in twenty-five. From 1832 to 1835, inclusive, the mortality was a little less than one in six. From November, 1836, to November, 1838, there were fifty-five successive cases without a single death." Of the prognosis in this, as in other epidemic diseases, speak guardedly in the commencement. No man can know what type the visitation may assume. So also in individual cases, be careful as to what you prognosticate. Some of the most promising cases, in appearance, that I have ever seen, have belonged to the class of insidious diphtheria. There has been little exudation, scarcely any fever, or interference, worth mentioning, with voice or breathing, when suddenly the larynx is invaded and the danger of death is imminent. In general, diphtheria is not fatal provided this last-mentioned complication does not occur. It is possible that asthenia or cardiac paralysis may kill, but in point of fact they very seldom do so. What gives us greatest anxiety is the *uncertainty as to the course* the exudation will take. Should we find it commencing in the posterior and inferior pharyngeal region, extending forwards and upwards, and leaving a healthy mucous membrane behind it,

as the exudation is liquefied, we may hope for a happy termination in so far as the most imminent danger is concerned; but, I repeat, until all exudative action has ceased, just anxiety must continue to be felt.

What shall we do in the treatment of a case?

In the first place, attend to the hygienic condition of your patient; see that a comfortable bed be provided; that it be properly placed, with reference to air, light, and noise; and that no more persons be allowed about the sick person than may be necessary to attend to the duties of nursing. Unfortunately, there is a tendency for the female relatives and friends to hold a protracted meeting over children who are ill of diphtheria. I need not tell you how much of the air they breathe and contaminate; how much they talk to and worry the patient; how much they benevolently suggest, each one, her specific remedy, and how much miscellaneous trouble they give. Usually, one person at a time, who has read Miss Nightingale, is all that should be allowed in the sick room.

Having secured this, a cardinal and too much neglected matter, what shall you do in the way of medication?

That will depend on the case you may be called upon to treat. Should it be one of the mild variety, I should advise you to do nothing beyond nursing and giving appropriate nourishment. By this, I mean such nutritious, easily digested food, as we can meet with in the animal broths, milk, and the farinacea. Do not overload the stomach, with the absurd hope that in its somewhat enfeebled state it will be able to go into the digestive business with so much energy as to counteract the natural tendency to debility. Unless for some special reason, the patient should not be made to eat oftener than once in three or four hours, and then the quantity should be carefully observed. I think something might be profitably written on this habit of stuffing sick people, that prevails with some practitioners. I know of no disease in which it is so much the rule as in typhus fever. In this, beef tea and brandy are, by some, systematically given, in the belief that the more the patient can be induced to swallow, the better will be his chance for recovery. Now there is nothing that so certainly tends to provoke restlessness, "nervous irritability," and insomnia, as the presence of material in the stomach which is beyond the digestive power of the patient.

We have a forcible illustration of this in the malaise that occurs from an over distended bladder. I can now recall cases in my experience, where opiates, by the mouth and by injec-

tion, valerian, musk, camphor, lavender, and many other antispasmodics, too tedious and useless to mention, had been prescribed by the doctor, without any relief, in which the evacuation of the bladder by catheter, or of the stomach by vomiting, have at once produced the quiet and sleep that know no succedanea as remedial agents.

It is very rarely that a sick person requires so much food as one in health would consume. It may be requisite to give it oftener, but even then we must be careful as to quantity and quality.

When the stomach is rebellious to the point of rejecting whatever is swallowed, I think it safer to resort to external applications in the way of irritants to the epigastrium, and to waiting for tolerance to be established, than to go beyond the simpler means resorted to, such as prussic, carbonic, or the mineral acids, creosote, or a few drops of chloroform. In diphtheria, be very careful of the stomach. Not long ago, I met with a case in which a delicate little girl, suffering from gastric irritability, was made to take a nauseous dose of cinchona infusion every four hours. This was done with a view "to strengthen the child, and to bring about an appetite," notwithstanding that the dose was offensive, and only swallowed after a hard fight, each time.

For some days, strength can be very well supported by the use of nutritious enemata. To these it is wise to resort where sustenance is imperatively called for, and the stomach will not perform its duty. For such enemata, the strong animal broths are preferable. *Let the stomach rest.* In view of the obvious tendency to diminution of the red globules of the blood, as a part of diphtheria, the use of iron would naturally suggest itself. I have, almost always, prescribed small doses of the sesquichloride tincture, administered in cold sweetened water. This is readily taken by children, and is worth much more, in my opinion, than any or than all other so-called constitutional remedies put together. A child three years old will readily take from five to ten drops of the tincture, every two or three hours.

With many practitioners, the chlorate of potash is considered as the chief remedial agent on which dependence should be placed. I have prescribed it largely, but with less satifactory results than seem to have rewarded the experience of some others. Should you employ it, I would recommend you to be careful to avoid the large doses sometimes advised. I have known instances in which severe gastro-intestinal irritation has followed its use.

Where stimulants are indicated, wine-whey, milk-punch, whiskey, or good brandy will be found beneficial. In cases of great thirst, nothing is more grateful nor more easily retained by the patient than mint-julep. Under similar circumstances, you must not forget how useful the carbonic acid water proves; especially where there is irritability of the stomach. Cracked ice is also an excellent remedy.

Our anxious attention, as I have already told you, in this disease, is directed towards the air-passages. Is there any means in our possession by which we can prevent the exudation from reaching them, in the way of topical medication? I am sorry to say that I do not believe there is. In different published articles on the subject, there are many means advised, such as swabbing the throat with the muriatic tincture of iron, with muriatic acid, with bromine, nitrate of silver, etc.; but I think it safe to advise you not to employ these with the hope indicated. Punching and poking about the tender parts with hard instruments, in my opinion, is much more apt to result in harm than in good.

Some years ago, I thought I had seen benefit from applying the iodide of bromine (four to eight drops to an ounce of gum syrup), by means of a large, soft camel's hair brush. I then believed that it prevented the membrane from extending. In this, I was probably mistaken. The application has one certain good result, whenever there is a sanious discharge from the nose or fœtor of the breath. It acts as an antiseptic. So, no doubt, would creosote or carbonic acid, properly diluted. Nasal injections of liquor of persulphate of iron and glycerine (℥j to ℥j) are also very serviceable.

In the terrible dyspnœa which accompanies the laryngeal form, the inhalation of steam is more efficacious than any other remedy. The apparatus recommended in Dr. Watson's Practice of Medicine may be resorted to; or the patient may be kept in a room so arranged as to be constantly filled with vapor, at a proper temperature, not less than 98° or 100° F.

In these always bad cases of laryngeal diphtheria, we must try to sustain life until the membrane shall have undergone the liquefactive change to which it has a natural tendency. It will then be expectorated, and we may hope for a cure, provided the exudation has not extended too far down the air-passages.

In conclusion, never fail to keep your patient in bed whilst there is fever or debility. Be careful of premature exposure on account of the impressible state of the general nervous system during convalescence.—*Am. Med. Times.*

THE CASE OF SURGEON-GENERAL HAMMOND.

Brig.-Gen. William A. Hammond, Surgeon-General of the United States, was tried by a court martial convened by order of the President at Washington on the 15th of January, 1864, consisting of Major-General R. J. Oglesby, United States Volunteers, President; Brig.-Gen. W. S. Harney, U. S. A.; Brig.-Gen. W. S. Ketchum, Brig.-Gen. G. S. Greene, Brig.-Gen. W. W. Morris, Col. United States Artillery, Brig.-Gen. A. P. Howe, Brig.-Gen J. P. Slough, Brig.-Gen. H. E. Paine, Brig.-Gen. J. C. Starkweather, with Major John M. Bingham as Judge-Advocate.

The charges are in substance as follows:

First—That Surgeon-General Hammond wrongfully and unlawfully, and with an intent to favor private persons in Philadelphia, prohibited Medical Purveyor Cox from purchasing drugs for the army in the city of Baltimore.

Second—That he unlawfully, and with intent to aid one Wm. A. Stevens, to defraud the Government of the United States, instructed George E. Cooper, Medical Purveyor in Philadelphia, to buy from Stevens, for the use of the Government, 8,000 blankets of inferior quality which were unfit for hospital use, he, the Surgeon-General, well knowing the blankets were of inferior quality, and that the Medical Purveyor had refused to purchase them.

Third—That he corruptly, and with intent to aid Stevens to defraud the Government, gave an order to Stevens to turn over to Medical Purveyor Cooper, at Philadelphia, 800,000 pairs of blankets; whereby he induced the Purveyor to buy on Government account, and at an exorbitant price, 7,677 pairs of blankets, which he had before refused to buy, and for which Mr. Stevens received $3,531,400.*

Fourth—That the Surgeon-General, well knowing that Wyeth & Brothers, of Philadelphia, had furnished medical supplies to the Medical Purveyor at Philadelphia, that were inferior in quality, and did corruptly, unlawfully, and with intent to aid Wyeth & Brothers to furnish additional large supplies to the Government, and thereby fraudulently realize large gains, gave the Medical Purveyor an order to have con-

* This is evidently an error. The 800,000 pairs of blankets should be 8000, and the sum paid should be 100 times less than the amount in the text.

stantly on hand hospital supplies of all kinds, for 200,000 men for six months, and directed the Medical Purveyor to purchase a large amount thereof, including $273,000 worth from Wyeth & Brothers.

Fifth—That he unlawfully directed Wyeth & Brothers to send 40,000 cans of the extract of beef to various places, and to send the account to the "Surgeon General's office" for payment.

Sixth—Conduct unbecoming an officer and a gentleman, in falsely representing that Medical Purveyor Cooper had been relieved from duty at the request of Gen. Halleck.

Seventh—That Surgeon-General Hammond unlawfully ordered the Medical Storekeeper and Acting Purveyor at Washington to purchase 3,000 pairs of blankets from J. P. Fisher at Washington.

A plea of "not guilty" was entered upon each of the charges and the specifications, and after a full hearing of the testimony for the Government and the defence, and an examination of a large amount of documentary evidence, together with the consideration of the elaborate arguments of both sides, the court rendered a finding of guilty on all the charges, and sentenced the accused to be dismissed the service and to be for ever disqualified from holding any office of honor, profit or trust under the Government of the United States.

Pursuant to the Act of Congress, the record and proceedings were reviewed by Brig. Gen. Holt, Judge-Advocate-General, who delivered an elaborate opinion, concluding as follows:

"That the natural and necessary results of the acts of the accused, as established by the record, involved a criminal spoliation of the Government treasury, which alone would have called for his dismissal from the service, cannot be denied; but when it is remembered, as shown by the proof, that this spoliation was in part accomplished by the purchase of inferior medical supplies and stores, thus compromising the health and comfort and jeopardizing the lives of the sick and wounded soldiers suffering in the hospitals and on the battle-fields of the country—soldiers solemnly committed to the shelter and sympathies of the office held by the accused, by the very law and purpose of its creation, it must be admitted that this fearfully augments the measure of his criminality."

The trial, which lasted nearly four months, was one of the most patient and thorough that has ever occurred in our military history, and the accused had throughout the assistance of eminent and able counsel in conducting his defence.

The court, which was composed of nine General Officers, at the close of this prolonged investigation, declared him guilty of the charges preferred, and awarded the punishment which, in their judgment, was in accordance with the nature of the offences committed, and a careful examination of the record leaves no room for doubt as to the validity of the proceedings, or the justness of the findings and sentence in this case.

The record, proceedings, and sentence of the court in the foregoing case are approved, and it is ordered that Brig. Gen. William A. Hammond, Surgeon-General of the United States Army, be dismissed the service, and be for ever disqualified from holding any office of profit or trust under the Government of the United States. A. LINCOLN.

Dr. Hammond has added as a sequel to the finding of the Court, the following card:

The undersigned has read in *The Sunday Morning Chronicle* of this city, the remarks of Judge-Advocate-General Holt in the proceedings of the court martial in his case. He learns from this review, and from the order of the President appended, that he has been dismissed the army and prohibited from ever holding office under the United States. The undersigned has no idea that he will lose one friend by this action of the Administration; but his good name is valuable to him, not only as regards those who know him, but those who do not. So soon, therefore, as he is furnished with a copy of the findings and sentence of the court, he will present to the public a brief history of the facts leading to his arrest and trial, a review of the record in his case, and some commentaries on the Report of the Judge-Advocate-General. With these he will be content to submit to the judgment of the world as to how far he has been guilty of the offences charged, and how far he has been the victim of conspiracy, false swearing, and a malignant abuse of official power.

(Signed) WILLIAM A. HAMMOND.

Washington, August 22, 1864.

THE SANITARY COMMISSION.

The present war, terrible in its magnitude and duration, has had benevolent accompaniments never before known in the history of the world. The various organizations for the

relief of soldiers, sick and wounded, in the camp, the field and the hospital, which are planted squarely on the generosity and patriotism of the people, brighten the gloom which our three years of conflict has hung around our country. Foremost among these is the Sanitary Commission, which has become a gigantic humanitarian organization, for the relief of the sick and wounded of our army. Only those intimate with its immense operations can utter its eulogy, or realize one-half its beneficient work.

The chief object contemplated by the Sanitary Commission, when it was created by the Government, was the prevention of disease. Modern sanitary science was hardly recognized in the ancient regulations of the medical bureau, and consequently, during the summer of 1861 our armies were in serious danger of destruction from epidemic disease. The first business of the Commission, therefore, was to awaken general attention to the sanitary interests of the army, and to do what it could to improve the sanitary condition of camps, hospitals, and men. It brought to bear upon Government the influence of the medical profession throughout the country, effected the extension and invigoration of the medical bureau, and secured the express recognition of the prevention of disease, no less than its cure, as among the functions of the medical staff. Government now employs its own sanitary inspectors, and does a certain portion of the preventive work which the Commission performed during the first year of its existence. But the Commission find it necessary to keep up an inspectorial corps likewise.

The visits of the inspector usually disclose something that can be done to improve or promote the health of the command. He finds that quinine is necessary to prevent malarious disease, or vegetables to prevent scurvy, or that stimulants, bedding, disinfecting agents, or hospital diet, are wanted. In consequence of his reports, the Commission have dug wells, to improve the water-supply of camps, improved the ventilation of hospitals, built temporary hospitals and quarters to replace unwholesome and dangerous buildings, furnished and fitted up hospital transports, and converted ordinary railroad cars into railroad ambulances, with cooking apparatus and store-rooms, and litters hung on springs, in which thousands of men with fractured limbs have traveled thousands of miles without injury.

It has furnished material for the vaccination of thousands of men at a time, when the medical bureau was not able to

supply immediately what was needed. It has circulated throughout the army, and especially among the medical staff, many hundred thousand of its medical documents. These have been prepared by some of the most eminent surgeons and physicians of the country, and embody, in a condensed form, the latest results of science. They have been of great use to our army surgeons, who often encounter cases for which their previous practice has not prepared them, and who have neither medical libraries nor opportunities for consultation.

It is, however, through the Relief Department of the Sanitary Commission that it is best known to the people. In this work it aims, not to supplant, but to supplement the Medical Department of the Government, to meet exigencies for which the Government has not provided, and to furnish such supplies as the Government does not and can not. When the Medical Purveyor has the articles needed in the hospital and camp, the army draws them from him; when he is out, or when from some emergency a larger supply is needed than is provided by Government, or when because of some technical informalities in the manner of making out requisitions the Purveyor is obliged to refuse them, and thus endanger life by the delay, the army calls upon the Commission, which never fails to respond to the call.

The relief agents of the Commission keep up with the army as it moves forward. Where the army encamps in the morning, the Commission has pitched its tents long before night. It reaches a new base as soon as there are soldiers to protect it, and is at work establishing hospitals and providing necessary stores before the ponderous machinery of the Government has moved; its red flags are seen everywhere at the front, blending with the stars and stripes, where it is establishing its feeding stations and depots of supplies. Prominent and experienced agents accompany each division of the army, with organized corps of assistants, wagons and supplies.

It is at great battles that the agents of the Commission are eminently useful. The battle-service of the Commission requires large funds and supplies. At Murfreesboro, Antietam, Gettysburg, Chattanooga, Vicksburg, and Port Hudson, sudden and vast demands were made. Fifty thousand dollars would not cover the outlay of the Commission the first two weeks after one of our great battles. At Gettysburg it was $75,000. The average cost is $3.20 to a man; at Gettysburg it wa $10 per man. The outlay of the Sanitary Commission during the months of May and June, for the battle necessities of the

present campaign, was over $500,000, exclusive of the supplies directed to it, and which it distributed.

This service requires comprehensive forethought, prompt and energetic action, and unwearied labor in infinite detail. Of some articles the requirements are enormous. Condensed milk, and extract of beef by the ton; wines and spirits by the barrel; crackers and farinaceous food by the ton; tea, coffee and sugar by the chest and hogshead; cargoes of ice; potatoes, onions, pickled cabbage, sourkrout, lemons and oranges, by car loads; shirts, drawers, sheets, crutches, bed-rests and mattresses, by tens of thousands! And this material has to be transported by wagon trains from one base to another; forage for horses has to be provided; drivers have to be paid, steamers chartered, and coal consumed; and yet so economically is the whole work of distribution managed that its cost is less than three per cent.

In addition to this, the Commission supports twenty-five Soldiers' Homes or Lodges, scattered over the whole field of war from New Orleans to Washington; and twenty-three hundred soldiers a-day are taken care of in these homes. Multiply 2,300 by 365, and you have over 800,000 men thus relieved annually. Three other agencies to secure the soldiers' rights are maintained by the Commission: 1. Claim agency to secure his bounty; 2. A pension agency; 3. A back-pay agency—all of them giving their services to the soldier free of charge. Often $20,000 back-pay is secured in one day. A Hospital Directory is also sustained, by which the whereabouts of the sick men is determined, when they are lost to their friends. It costs $20,000 a-year to maintain it, but is worth a million, if the relief afforded to human anxiety can be estimated in money.

To carry on this vast human machinery, the Commission employs 200 agents at an average of about $2 per day—less than an ordinary mechanic's wages—or a total of $12,000 per month, who operating from Texas to the Potomac, or from Charleston to Kansas, and the results are such as to justify the nation's pride in this grand and beneficent, yet truly American institution.—*People's Journal of Health.*

THE ORIGIN OF

COW-POX AND THE NATURE OF VACCINE VIRUS.

Investigation on this subject in the Paris Academy of Medicine, has led to the following conclusions:—

1st. That vaccine virus (as a thing separate and apart) has no existence.

2d. That the pretended vaccine virus, which we consider antagonistic to, and neutralizing the variolus virus, is the variolus virus itself.

3d. That the equine and bovine species are subject to an eruptive malady which is identical, as regards its nature, with variola of the human species.

4th. It is demonstrated that the same is the fact as regards several other species of animals, pigs, sheep, dogs, goats, etc.

5th. The local and general phenomena with animals are the same as those observed in man. The only difference as regards the pustules are those which depend on the structure of the skin and the number of the hairs.

6th. As in the human species, so in the equine and bovine, variola may appear sporadically.

7th. From the horse we may inoculate the cow, and reciprocally.

8th. From the cow we may inoculate, without difficulty, individuals of the human species, provided they have not had spontaneous or inoculated variola.

9th. The cow, the horse, and several other species may be inoculated with variolous matter from the human species.

10th. When a variolous epidemic occurs among men, it often extends itself, by contagion, to other animals.

11th. An epidemic of variola may commence among animals, and extend to man.

12th. Inoculated variola produces a much less degree of general reaction than does variola developed by contagion. This is true in both man and lower animals.

13th. The pustules which result from inoculated variola, are often limited to the points inoculated.

14th. When a secondary eruption is produced, it is almost always insignificant, and composed of a small number of pustules.

15th. In a general manner we may say that the variola of animals is more discrete, and less severe, than that of the human species.

16th. That the dangers of inoculation of variola in man have been much exaggerated. The unprejudiced study of what has been written on this subject will convince of this.

17th. It is probable that animals, as man, are subject to aphthous eruptions.

18th. But the *maladie aphtheuse*, as it is described by writers on veterinary medicine, is nothing less than variola.—*Medico-Chirurgical Review.*

Dissolving Power of the Pancreatic Juice.—M. Corvisart has shown that in animals the pancreatic juice has the power of dissolving albuminous foods without the assistance of the gastric juice or the bile; and now he has demonstrated the same thing in man. A hospital patient, in perfect health, having suddenly died from chloroform administered for the reduction of the femur, M. Corvisart removed the pancreas; and with the prepared juice and ferment of it, operated on albuminous matters. He found that a large quantity of albumen and fibrin was rapidly digested with its assistance.—*Brit. Med. Jour.*, May 28, 1864.

Aggregate Labor of Mankind.—Along with the compassion that is excited by listening to a tale of want, there is apt to arise, at the same time, a feeling of astonishment that such a thing should *be* in a land like this. Perhaps, however, the true wonder is that want is not universal. One-half of the race die before they have contributed an iota to the world's sustenance or their own. One-half of those who survive the period of childhood are women, who do not, as a general thing, contribute directly to the production of wealth. Of the men, many are sick, many are old, many are idle, many are wasteful, many are parasites. Those who do work and live to the age of three score years and ten, spend one-third of their lives in bed, one-twentieth at the table, one-sixth in recreation. Much of their time is wasted in mistakes; much of what they succeed in producing is swept away by fire and flood. During half of the year Nature sleeps. One harvest in five proves a

failure. Only a fraction of the earth's surface is capable of cultivation. A large part of the general labor is absorbed in the production of luxuries, in repairing the damages of war, in preparing for future conflicts, in the transportation of produce, and in journeys. Probably not more than *one-tenth* of the whole amount of human force is expended in earning the world's daily bread. The standing marvel, therefore, of society is, not that any should suffer want, but that there should be any who do not.—*Home Journal.*

Atropia : Its Action and Uses.—Atropia, when applied locally in solution (without spirit), is not a local paralyzer, as commonly supposed, but it appears rather to quicken the contraction of the parts to which it is applied. Applied directly to the smaller arteries, atropia constricts them (Jones), and this effect may continue for many hours. It hence, probably, causes relaxation of the tissue of the iris, by causing constriction of the arteries entering it. In an atropised eye, the vision is clearer with distant than with near objects; this shows that the lens has receded and approached the retina, and is caused by a relaxation of the erectile structure of the ciliary processes from the constricting action of the atropia. This theory of the turgescence or emptiness of the vessels of the iris, causing, respectively, the contraction or dilatation of the pupil, explains why we have wide pupil so frequently in atonic and exhausting diseases, in aneurism of the chest and neck, impeding the passage of blood into and through the carotid. Worms and diseases of the belly in children dilate the pupil and impair the sight, probably by reflex action through the sympathetic nerve, exciting the radial fibres of the iris, and contracting the cerebral arteries.—*Dr. A. Fleming.*

Grafting Animals.—Dr. Paul Bert has published a work on the curious subjects of animal grafts. He succeeded in making Siamese twins of a couple of rats, and many other monstrosities. He exclaims, "it is a surprising spectacle to see a paw cut from one rat, live, grow, finish its ossification, and regenerate its nerves under the skin of another, and when we want a plume of feathers under the skin of a dog, what a miracle to see the interrupted vital phenomena resume their course, and the fragment of a bird receive nourishment from the blood of a mammal.—*Intellectual Observer.*

Deaths From Chloroform.—An inquest was held on Friday, June 24th, at King's College Hospital, on the body of Mrs. E. Ruth, aged 29, who died from the effects of the vapor of chloroform during an operation for removing a tumor in the urethra. A question arose as to the quantity administered to her on a former occasion, and the absence of books of reference in such cases in the hospital. The following verdict was returned:—"That the deceased died from the effects of the vapor of chloroform," and the jury expressed their opinion that proper case-books for reference should be kept in the hospital. Another fatal case occurred at Middlesex Hospital, on Tuesday, July 5th. This was an operation for the removal of a large tumor from the face, during which the patient died on the operating table. A third case occurred at St. Mary's Hospital, where an inquest was held on Monday, July 18th, on the body of James Birch, aged 56, who died while under the influence of chloroform, administered previous to an operation for the removal of the bone of the great toe. A *post mortem* showed extensive disease of the heart.—*London Phar. Jour.*

Charity Hospital Medical College.

Cleveland, Ohio.

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Persons desiring further information can address the Dean or Secretary at Cleveland, Ohio.

GUSTAV C. E. WEBER, M. D.,
Dean of the Faculty.

Sep. & Oct.

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ORIGINAL COMMUNICATIONS.

REPORT ON ORTHOPEDIC SURGERY,

MADE AT THE ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, CONVENED IN CHICAGO, MAY 3D, 1864.

By DAVID PRINCE, M. D., Jacksonville, Ill.

NOTE.—The Verbal Analysis of the report made to the Society covered portions of the whole ground of Orthopedic Surgery. By resolution of the Society all reports were required to be furnished for publication by the 1st of July. It is impracticable with other engagements to complete the whole Report in a satisfactory manner, by that date. The portion embracing the group of deformities of the feet, known by the generic term TALIPES, is all that can appear in the Transactions for this year.

It is believed that the presentation to the profession of the latest advances in this country and in Europe, with the improvements introduced by the writer, will enable every practitioner to cure every uncomplicated case of Congenital Talipes occurring in his own practice, if undertaken during the early months of infancy.

It is also believed that most cases under fifteen years of age are capable of successful treatment, by patience, perseverance and skill.

DEFINITION AND CLASSIFICATION OF THE GENUS, SPECIES, AND VARIETIES OF TALIPES.

The term Talipes (Latin, *talus*, an ankle, and *pes*, a foot,) has come to be adopted as a generic term for what is known as club foot, reel foot, and splay foot or flat foot. The name expresses only a minor element of the deformity—the ankle in some species being not at all displaced or deformed—but this is of no great importance, since the technical signification has been agreed upon.

Definition.—A malposition or malformation of the foot, congenital or acquired, in which, from some deviation at the ankle joint, or in a greater or less number of tarsal or tarso-metatarsal joint, the sole of the foot fails to apply to the ground in the natural position.

Of this genus there are six species: Talipes equinus, calcaneus, varus, dorsalis, plantaris, valgus.

Of these species there are six possible secondary combinations or varieties: Talipes equino varus, equino dorsalis, equino valgus, calcaneo varus, calcaneo valgus, calcaneo plantaris.

The conception of the tertiary combinations, when once familiar, will also be simplified by classifying them thus:

Talipes equino varo dorsalis, equino valgo plantaris, calcaneo varo dorsalis, calcaneo valgo plantaris.

Talipes equinus, is the term applied to that position which, by long continued voluntary elevation of the heel to compensate for several inches shortening of the limb, becomes, not only habitual, but fixed, by the permanent shortening of the triceps extensor pedis, and the adaptation of the ligaments to to the habitual relations of the bones of the leg and tarsus. The habitual voluntary contraction of the triceps muscle (gastrocnemius, plantaris longus and soleus,) terminating in the tendon Achilles, becomes permanent and involuntary; after which the muscular tissue changes its character, is absorbed,

or in part replaced by fat, while the white fibrous tissues investments become hypertrophied, converting the muscles into ligaments both in constitution and function. The result is a compensating deformity, and to attain the best possible compensation bringing the phalanges as nearly as possible within the vertical line of pressure, the foot comes to be more than naturally arched by the contraction of the tibialis posticus, the peroneus longus, the flexor longus digitorum, upon the back of the leg, and the adductor pollicis, the flexor brevis digitorum, the abductor minimi digiti, and the muscular accessories, with corresponding shortening of the plantar fascia under the foot. The action of the long and short flexors of the toes would curl them under the sole, as the fingers are flexed upon the palm, if they were not kept out by the weight of the body upon the phalanges.

This makes the variety I. equino-cavalis, which in the confirmed state is more common than either species mentioned. The deformity which has been described as originating in a voluntary attempt at compensation, may result from spasmodic contraction of one set of muscles, or paralysis of their antagonists.

Talipes calcaneus.—A deformity in which the foot comes to the ground and the anterior portion of the foot is drawn up by the disproportionate contraction of the tibialis anticus, peroneus tertius, and extensor longus digitorum. This is a deformity so rare as only to be admitted as a possibility.

Talipes calcaneus planterus, is a combination equally rare, in which the yielding is not chiefly in the triceps extensor pedis, but in the medio-tarsal articulation, between the astragalus and the calcaneum behind, and the scaphoid and cuboid before, with yielding in a smaller degree of the more anterior joints of the tarsus.

Talipes varus.—This is the most common of all the species, whether congenital or acquired, and consists in the inversion and rotation of the anterior half of the tarsus, which can in a slight degree be increased by taking hold of the phalanges and

metatarsus, and bending the foot in the direction in which the tibialis anticus would draw it. In making this twist, the calcaneum and astragalus will become adducted, as in the position which a child will sometimes assume in standing upon the outer edge of his foot.

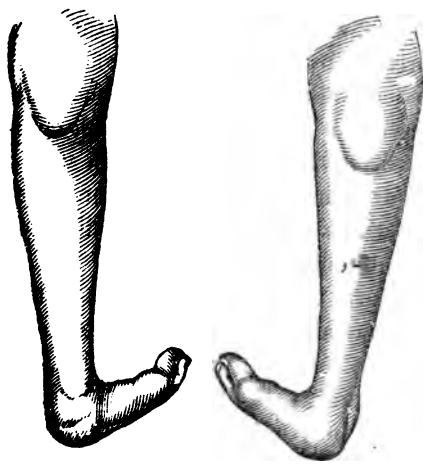
Attention has been called to a better anatomy of this deformity by Mr. Barwell, in his little book, entitled "Club Foot without Division of Tendons," in which he gives the appropriate name "medio tarsal articulation" to the articulation between the calcaneum and the cuboid on the outside, and between the astragalus and the scaphoid upon the inside. "This is the centre of the twist, which in a delicate foot can almost be imitated, inward. While outward, or in even the opposite direction, there is very little capability of a twist to bring down the inner side of the sole."

In this species there is no important contraction of the triceps, through the tendon Achilles, or in other words, a corresponding elevation of the heel. The heel is tilted over as if the hand were adducting the whole foot, by taking hold of it and pulling it inward. The inner or tibial edge of the foot is turned up, and the outer or fibular side turned down, and in the worst cases, carried in toward the opposite foot, so that the outer side of the dorsum of the foot comes to the ground. The sliding of the scaphoid outward upon the astragalus makes the former bone very prominent, receiving, with the cuboid and the anterior portion of the outer and lower edge of the calcaneum, the weight of the body in standing and walking. The cuticle becomes unnaturally thickened, and between the integument and the bone, bursæ develop themselves as cushions to protect the bones from pressure in walking.

There is at first no transverse narrowing of the metatarsus and phalanges, but the pressure of walking gradually approximates the two borders of the metatarsus and phalanges; the fissure or concavity being in the plantar surface. The deformity appears to result from disproportionate contraction of the tibialis anticus, while the flexors and extensors are balanced,

and the peronei muscles paralyzed. The tibialis posticus assists in the inversion of the foot so as to make the toes point toward the opposite foot.

Fig. 1. *A Front View.*



This mal-position is very well illustrated by the following cuts representing the lower extremities of a gentleman 52 years of age, whose parents took him to Cincinnati when an infant, to consult the best surgeons of that city. The parents were told that nothing could be done for the child.

Fig. 2. *A Back View.*

It will be noticed that, in these figures, there is very little elevation of the heel through shortening of the tendon Achilles, the mal-position consisting of a remarkable twisting and doubling of the feet.

Talipes equino varus.—This combination is the most common variety of Talipes acquired subsequently to birth, and consists of disproportionate contraction of the triceps extensor

pedis, through the tendon Achilles, elevating the heel, and making a Talipes equinus. The tibialis posticus tends to double the foot inward, while the tibialis anticus at the same time acts upon the inner edge of the foot, and rotates it, while the tibialis posticus, flexor longus digitorum, and the short flexors originating from the calcaneum, shorten the arch of the foot, making the compound expressed by the succession of terms, Talipes equino-varo-dorsalis. Walking doubles the foot still more, antero posteriorly as well as transversely, almost completely turning it upside down, giving the gait a much worse hobble than that of simple varus, and presenting a complicated deformity requiring apparatus equal to the versatility of the hand for its successful treatment.

Talipes dorsalis.—An unnatural elevation of the arch of the foot by a change in the medio-tarsal articulation, or the tarso-metatasal articulation, or in all combined. This condition has already been noticed in combination, in T. equino dorsalis, and T. equino varo dorsalis. It may exist as an uncombined deformity, either as a natural development, as the result of disease or injury, or as an artificial production. The shape of the foot produced by the Chinese shoe is a shortening of its length and a humping up of the instep, making a stumped appearance—a Talipes dorsalis.

It may also result from a partial dislocation, breaking up of the ligamentous fastenings on the dorsum of the foot, and permitting a shortening of the base of the tarso-metatarsal arch. This once occurred under the observation of the writer. A young man falling twenty feet, from a tree, and dislocating the tarso-metatarsal articulations of both feet. The deformity was never completely reduced, and the tarso-metatarsal joints remained permanently elevated, requiring shoes to be made according to special measurements.

Talipes plantaris—flat-foot.—The condition in which the sole comes to the ground in all parts; there being little or no arch. This is the natural condition in a portion of the negro race, and is often the result of want of action of the tibialis

anticus and T. posticus, resulting in elongation of the plantar fascia from too great tension of it. In feeble children it comes from premature walking.

Talipes valgas.—The condition in which the anterior half of the foot is carried outward in the direction opposite to that of T. varus.

The tibialis anticus and tibialis posticus fail, and the peroneus longus and peroneus brevis passing behind the external malleolus, pull upon the outer side of the foot and evert it. At the same time the peroneus tertius passing down in front of the external malleolus, elevates the outer side of the foot and tilts the astragalus and calcaneum outward in the opposite direction to that taken in T. varus.

Fig. 3. Seen from behind and on the inner side.

The following cut illustrates this species, which is rarely met with, without complication. The figure is taken from the cast of the foot of a gentleman living in Boston. The cast is kept by Messrs. Tiemann & Co., Surgical Instrument Makers, N. Y., for the purpose of making upon it, the apparatus which aids him in walking.

It will be noticed that this is a simple Talipes valgas without any flattening of the arch of the foot to make the species plantaris. The more common development is,

Talipes valgo plantaris.—The condition in which the anterior half of the foot is carried outward and upward, bringing the inner side of the tarsus to the ground, while the arch of the foot is lost by the relaxation of the muscles, ligaments, and fasciæ which sustain it. As the deformity progresses, the extension or downward projection of the medio-tarsal joint, permits the metatarsis to rise altogether from the ground by the action of the peroneus tertius, leaving the weight to come

altogether upon the tarsus. This extreme perversion, however, constituting a Talipes calcaneo-valgo-plantaris, is rarely attained. When existing, it must arise from the action of the extensor longus digitorum acting in concert with the peronei muscles, or more commonly, from paralysis of the opposing flexor and adductor muscles.

Talipes calcaneo varus is only a possible variety, resulting from disproportionate action of the tibialis anticus and tibialis posticus, the triceps extensor pedis being paralyzed, so as to prevent the long flexors to elevate the metatarsus, while the heel remains depressed.

This classification may seem unnecessary, but it is the shortest way of describing the great variety of deformities classed under the generic term Talipes. Having once become familiar with the terms, they will ever afterwards convey definite ideas, not only of the forms, but of the muscular contractions which must be concerned in producing and perpetuating them.

A clear idea of these conditions will lead to a rational interpretation of the indications of treatment, whether preventive or curative.

Similar deviations from the normal form of the hand should receive a similar classification, only that their rareness makes it unnecessary. Their pathology is undoubtedly the same, whether con- or post-genital, depending upon paralysis of one class of muscles, or over-action of their antagonists, or both combined, or more rarely, some accidental injury, resulting in partial dislocation, ending in permanent deformity, or from the contraction of the cicatrices of burns or ulcers.

COMPLICATIONS.

1. The complications may be congenital or acquired absence or diminution of one or more bones, implying the impossibility of complete restoration of the form and functions of the foot, though great improvement may in some cases be effected by treatment.

2. Anchylosis of one or more joints from fractures or wounds nearly or quite helpless of benefit from subsequent treatment.

3. Anchylosis from arthritic or periosteal inflammation, in which the treatment is chiefly preventive by substituting before it is too late passive motion for absolute rest of the parts in relation to each other.

4. Contraction of cutaneous cicatrices from burns, ulcers or wounds. The treatment should be preventive; for confirmed deformities from these sources are extremely difficult to overcome.

5. Rheumatism, producing talipes, or simply attacking a talliped, requiring the abatement of the rheumatism in addition to whatever else may be done.

6. Corns and bunions requiring nice adaptation of shoes where, from the age of the patient, they cannot be cured by restoring the foot to its proper form.

7. Absence or deficiency of toes.

8. Supernumerary toes which may be cut off.

9. Deviation of the forms and directions of the toes from fractures, wounds, arthritic or periosteal inflammation, the contractions of cicatrices from burns or other injuries, from faulty shoes, from pressure of the weight of the body, or from paralysis of muscles. These deviations are sometimes incapable of remedy except by amputation of offending toes.

CAUSES AND NATURE OF TALIPES AND ALLIED DEFORMITIES.

The nice adjustment of forces by which typical symetry is produced and maintained in all organized growth, only needs to be contemplated to secure admiration.

The exceptional deformities, proving the possibility of imperfect adjustment of these forces, or of the occurrence of accidental impediments to their exercise, only excites our attention all the more, to the nice balance observed in the ordinary working of the law of development.

In individual failures of this organic law of symetry, the question will arise as to the modes of deviation:

1. Whether from excessive nutrition, analogous to that which secures the disproportionate growth in parts which are brought to perform compensating functions, as a leg or a kid-

ney, which, from the impairment or destruction of the opposite, is invited to perform more than its natural part.

2. From deficent nutrition direct, from the obstruction of the blood-vessels which supply it, or indirect from failure of nervous supply to the capillaries of a part, failing to open them to the supply of blood, or from accidental or artificial quietude, and ogus to that of muscles closely confined in splints and bandages while a fractured bone is uniting.

3. From accidental positions, widely varying from those which are usual and which act to produce deformities like the forces which are afterwards employed to remove them. By this means some tendons may be forced to grow too long and others permitted to become too much shortened; while the bones, which become inordinately compressed, take the shapes which the altered forces tend to give them.

4. From some observations made by Cruveilhier, this careful pathological anatomist came to the conclusion that position of the foot within the uterus was often a cause of Talipes.

As a moderate Talipes varus is the ordinary position of the foot within the uterus, this deformity can hardly be explained upon this hypothesis, but a Talipes valgus might possibly be produced by an eversion of the foot from the pull of the umbilical cord accidentally entangled around it.

Twisting and displacements and spontaneous dislocations of the knee joint, of the hip joint and of the shoulder joint can sometimes be most plausibly explained upon this supposition.

5. From the occurrence of causes which directly compress, or partially or completely cut off portions of the developing limbs. Portions of the liquor amnii unusually condensed or solidified into sheets or shreds, may produce deep fissures in parts upon which they press, or they may completely amputate the included parts. The peculiar deformities constituting the genus Talipes can hardly be explained by reference to this class of causes. Spontaneous amputations doubtless often owe their occurrence to this cause.

6. From disease directly resulting in the death of the parts affected. The writer has in his possession an aborted fœtus of four months, which exhibits gangrene of one upper extremity, including the shoulder. If this fœtus had lived, there would have been the birth of a one-armed child. Spontaneous amputations are sometimes produced by this cause, but Talipes cannot be thus explained.

7. From the union of parts of two or more individuals resulting in redundancy of number. This is the explanation of a great variety of monstrosities, but it does not apply to Talipes.

8. From an influence existing in the germinal origin of the individual, like that which determines the color of the skin, the family likeness of features and the temperament. It is thus that in same families there is a perpetuation through several generations of five fingers upon the hand and six toes upon the foot, the deficiency of a thumb or a redundant one.

Though several cases of Talipes sometimes occur in one family, and in rare cases it may be repeated in the next generation, the cases are too few to favor this explanation of its occurrence. Causes acting upon the innervation of the fœtus subsequent to the formation of the type of the individual constitute a more probable explanation.

9. From causes set in operation through physical and mental influences of the mother. As an example of physical influence: One of the common expedients for distinguishing pregnancy from enlargements within the abdomen from other causes, is to place the hand, previously reduced in temperature, upon the mother's abdomen, to excite a convulsive movement in the fœtus. This movement may be stimulated by the compression made by the sudden tension of the abdominal muscles induced by the cold application. On the other hand, great physical exertion and the occurrence of grave disease affecting the constitution of the circulating fluids, are followed by diminution or cessation of fœtal movements, as if from some diminution of the fitness of the blood to afford to the

fœtus the highest activity of nutrition. The death of the fœtus and its expulsion is a frequent occurrence under these circumstances.

That deformities should sometimes arise from this impaired or perverted nutrition is as probable as that similar disturbances should, after birth, produce local congestions and inflammations, or convulsions and paralysis; some constitutional tendency previously induced determining the location and character of the diseased action.

Protracted mental depression, the indulgence of ungoverned anger, hate or revenge, impairing digestion, are supposed to be unfavorable to the best development of the fœtus, while the cheerful and joyous emotions are invited as most favorable.

With the shock from the sight of a repulsive object the mother feels a convulsive movement of the fœtus, followed by a diminution of habitual movements, and her attention is afterward anxiously fixed upon her own sensations and those produced in her by the fœtus. Derangement of the digestion of the mother, and the consequent impairment of the healthy and nutritive qualities of her blood, which is the source of nutriment to the fœtus, often exist for a longer or shorter period, and deformities sometimes follow; but at the birth the mother's fears are generally found to be needless, as a perfect form occupies the place of the dreaded deformity.

In the few cases that do occur there are, in exceptional instances, striking resemblances to some object seen by the mother during pregnancy; but, upon close scrutiny of the deformities, they are found to belong to classes of excessive, deficient, perverted or arrested development already referred to, from the various causes classified, and their resemblances are too few, in comparison with the whole number, to be worthy of any other explanation than that of coincidence. We all know how a striking coincidence takes more hold upon the mind than many discrepancies. The adoption, early in the civilization of all nations, of the theory of the direct

production of special deformities, through the images impressed upon the mind of the mother, is probably thus best explained.

The deformities arising from spasm and paralysis are more frequent in the lower extremities from the more feeble, more easily deranged and less easily restored innervation of these parts. They are therefore more often seen in the streets, and from the awkward movements in walking they are more repulsive than deformities of the upper extremities which need not be made conspicuous in public places.

The late development and comparatively low innervation of the inferior half of the fœtus might be expected to result in the existence at birth of a greater number of deformities, produced by nervous derangements, in the inferior than in the superior half of the body. From this physiological order of development, as well as upon the hypothesis of coincidence, therefore, a mother who is shocked at the sight of a lame leg is more likely to have a child affected with Talipes than with a corresponding deformity of the hand, the deteriorating influence of the nervous impression upon the blood being more likely to result in spasmodic or paraletic afflictions of the lower than of the upper extremities of the fœtus.

(*To be continued.*)

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

THE IRIS.—ANATOMY AND PHYSIOLOGY.

GENTLEMEN:—We have, thus far in our course, finished a brief examination of the conjunctiva, cornea, and their diseases. I need scarcely repeat that these diseases are the most

important for you to understand, since they are the most common, and, if neglected, perhaps the most destructive to vision.

In the limited time to which we have been confined, I have necessarily been unable to present to your consideration more than the outlines of the subject—to teach you how to study these diseases by showing you as many cases as possible, and by referring you to the most reliable authorities.

We now come to an entirely different series of structures, the Iris, Crystaline Lens, and Ciliary Processes—the study of their anatomy, physiology, and their diseases, which are of uncommon interest. As heretofore, I shall necessarily be brief and present you but the outlines of the subject I think you will not fail to follow with interest.

The Iris is a thin, circular membrane, composed of areola tissue, containing muscular fibres, vessels and nerves. This areola tissue is filled with a number of star and spindle shaped cells, with minute appendages, anastomosing with each other, as described in the lecture upon the conjunctiva. These cells are, to a greater or less extent, supplied with pigment.

The muscular fibres are non-striated and are arranged in two distinct groups; the circular running parallel with the pupil in concentric rings; and the straight, radiating fibres, which are arranged between the circumference of the iris and the pupil, like the spokes of a wheel. The contraction of the former muscles diminishes the size of the pupil, that of the latter increases it.

Although numerous pigment cells are found throughout the whole substance of the iris, they are especially abundant in its posterior layers. The amount of pigment in this layer is perhaps more uniform in different individuals than in the other layers. In individuals with light-colored irides this pigment shows through the other layers which are comparatively free from pigment, giving a blue or gray color to the eyes. Infants usually have but little pigment in the anterior layers of the iris, hence their eyes are generally blue or gray. As they become older, more pigment is deposited. The different shades

of color in the iris of the adult depends upon the amount of pigment in the anterior layers of the iris. Occasionally pigment is so unequally distributed in the iris that small dark spots are observed upon its surface.

The posterior surface of the iris is covered with minute radiating lines, continued from the ciliary processes. The whole iris is covered with a delicate epithelial layer.

The diameter of the iris is more than a line longer than that of the cornea. This is an important point in connection with the operation for artificial pupil. An instrument introduced through the sclerotic three-fourths of a line behind its union with the cornea, if held parallel with the plane of the iris, will enter the anterior chamber without injuring the iris.

The iris is attached at its periphery to the cornea and ciliary processes. This attachment is quite delicate, and seems to vary in strength in different individuals, if we may judge from the readiness with which it is broken by slight blows upon the eye. The iris is hung like a curtain in the space between the lens and the cornea, dividing it into two chambers, the anterior and posterior. The papillary edge of the iris is in contact with the anterior surface of the capsule of the lens. The posterior chamber is therefore very much smaller than the anterior, being in fact but a very narrow space near the periphery of the iris.

The iris is supplied with nerves of sensation from the fifth pair; the motor nerves of the circular muscles are derived from the third pair, and the motor nerves of the radiating fibres are derived from the sympathetic. These nerves, after passing from the ciliary ganglion, situated just behind the eye at the outside of the optic nerve, divide into twelve or more filiments, which enter the sclerotic and pass forward in the choroid to the ciliary muscle and iris.

The vessels of the iris are the ciliary arteries and veins—branches of the ophthalmic artery and vein.

The functions of the iris are three-fold: to regulate the amount of light which enters the eye; to secrete the aqueous

humor; and to assist indirectly in adjusting the eye for vision at different distances.

Normal changes in the size of the pupil are produced by variations in the amount of light, which falls upon the retina. A ray of light shining upon a portion of the iris above, without passing through the pupil, will not cause it to contract. But if the ray enters the pupil, the contraction occurs at once.

Although the iris is believed by most physiologists to be the organ which secretes the acqueous humor, it is evidently not the sole source of this fluid, since it is still found in the anterior chamber, when the iris has been removed from the eye by accident. It is so richly supplied with blood and secretes the acqueous humor with such rapidity, that when wholly evacuated through an incision in the carnea the anterior chamber is refilled in a couple of minutes.

When we come to speak of the power of adjustment of the eye for vision at different distances, your attention will be called to the part performed by the iris in this act.

There are several interesting and important points regarding the pupil which you should remember, not only as students of diseases of the eye, but as students of general Medicine. In examining an eye with a dilated pupil, you should bear in mind that the patient may have used, with or without design, Belladonna in some form. With the pupil contracted there might be reason to inquire whether Calabar Bean had been employed.

In examining an eye in reference to the movability of the pupil, the other eye should be kept covered, while the former should be alternately covered and uncovered with the hand. The following fact will explain the reason why this should be done: If both eyes are exposed to light, on covering only one of them the pupil will dilate but half as much as it would if the other was covered also. The manner I have just described will enable you to obtain the greatest possible change in the size of the pupil.

The pupil is much contracted during sleep. The iris re-

sembles the other sphincters of the body in being thus firmly contracted during sleep.

The condition of the pupil is an important symptom in several pathological changes in the nervous system. A constantly dilated pupil is often a symptom of disease of the optic nerve, so often called amaurosis. Sometimes, however, when a patient cannot distinguish day from night, the pupils will dilate and contract upon alternately exposing the eyes to light and shade.

Contraction of the pupil often occurs when the ocular branches of the fifth pair of nerves are irritated, as for instance by the presence of a mote upon the cornea or under the lid.

Whatever produces directly or indirectly either irritation of the nerves supplying the circular fibers of the iris, or paralysis of those supplying the radiating fibers, will cause contraction of the pupil. But either paralysis of the circular or irritation of the radiating muscles will produce dilatation of the pupil. Certain fractures of the skull, compression of the brain, tumors, and effusions of blood or serum in the brain, by paralyzing the nerves of the circular fibers often produce dilatations of the pupil. Irritation of the bowels, onanism, seem to produce the same condition of the iris by irritation of the nerves of the radiating muscles.

Belladonna appears not only to paralyze the circular muscles, but also to excite the radiating fibers to contract, thus producing dilatation of the pupils. When taken internally this drug passes by the circulation to the nervous centres. When applied locally it acts directly upon the iris itself, being absorbed by the tissues and conveyed directly to the iris.

It is perhaps worthy of notice that the pupils are contracted when the axis of the eyes are convergent, as in looking at near objects. On the other hand, they are dilated when the axes are divergent, as in looking at distant objects.

In near-sighted individuals the pupils are usually dilated and situated quite far behind the cornea. On account of this

great depth of the anterior chamber the cornea appears more convex than it really is.

In far-sightedness the pupil is usually much contracted and placed forward with the lines quite near the cornea; the anterior chamber is consequently of comparatively little depth.

These subjects will be more fully discussed in a subsequent lecture.

SELECTED.

ON CERTAIN ABUSES OF CAUSTICS.

By Dr. JAMES MORTON,

Lecturer on Materia Medica, Anderson's University, and Surgeon to the Glasgow Royal Infirmary.

I common inflammation of the fauces, popularly known as sore-throat, and usually ascribed to cold as a cause, and whose symptoms I do not take time to enumerate, presuming that no one can mistake it, surely the employment of caustics can not be said to be requisite. But besides being unnecessary, there is the additional objection that it is the means of inflicting a very considerable amount of pain. The disease will speedily disappear, if left to itself, or treated by soothing agents. Should suppuration take place, the possibility of the caustic application producing an earlier evacuation of the pus must be admitted. This, however, must be regarded as an accidental circumstance, as the caustic is not employed with this intention.

Very much the same may be said in respect to ulcerated sore-throat, except that in addition some mild alterative may be required, and a caustic application can only rarely, if ever, be necessary to repress prurient granulations, as in other parts of the body.

In regard to the three eruptive diseases, measles, scarlet fever, and small-pox, in all of which the throat is so apt to become affected, it is difficult to speak so as to avoid misconstruction. When a slough forms upon the fauces, the part is

often diligently assailed by the over-zealous practitioner, in the hope of thereby arresting the sloughing process; and when it ceases to extend, he is thought to have succeeded, and he plumes himself and is praised by others accordingly. I have no hesitation in affirming that this gratulation is often misplaced, and that the slough would have been smaller, and would more speedily have disappeared, had no caustic application been resorted to. This is not unfrequently exemplified in the treatment of scarlet fever, in which the mucus surface of the throat often suffers severely. Almost every one who has seen much practice must have witnessed cases of this severe throat complication occurring in children, not infants, who have obstinately and perseveringly, and with success, resisted all attempt to cauterize their throats, or even to touch them. In very many instances these do as well as, or better than those who may have been subjected to the ordeal; and the former are often as severe in the character of the attack as the latter. The more rarely, therefore, that we employ caustics in such cases, the better for our patients, and the more pleasant will be our treatment. All the local applications may be of a soothing nature, and it is not our present duty to discuss the constitutional treatment. (It may be proper to remark also, that the erosive treatment of small-pox by nitrate of silver, is a topic foreign to the object of this paper.) Some have an idea that active treatment of the local complication has a powerful influence over the constitutional affection; or, in other words, that the speedy removal by caustic applications of the morbid exudations from the situations upon which the disease seems to fasten in its greatest intensity, is of the very greatest effect in counteracting the deleterious action of the morbid poison upon the general system. This notion (it is scarcely entitled to be called an opinion) will not be maintained by many, and is such an untenable position that it does not seem to be necessary to attack it. An opposite mode of reasoning is taken by the majority, viz., that the severity of the systematic poisoning has much to do with the intensity of the local manifestations of it.

After what has now been said with more especial reference to scarlatina, it is not requisite to say much respecting measles and small-pox. Affections of the throat are not so common in these two varieties of the exanthemata, and the objections already urged may apply to rubeolous and variolous cases in which the throat is found to suffer.

In the disease now styled diphtheria the use of caustics, as

they are too often employed, is, in my opinion, productive of the most disastrous consequences. All the symptoms of this malady indicate the presence of a general toxic agent, probably an epidemic poison, and the prominent symptoms are those of debility, the throat affection coming on insidiously, often unperceived for a time, often with little or no pain, and a slight degree of swelling, though in some cases the tumefaction in and around the throat is very considerable. The chief indication is to support the strength; another important though subsidiary one ought to be, to avoid measures calculated to add to the existing local complications. It is a custom with some, I hope not with many, to divest the fauces of the whitish leathery covering which forms upon them, literally to dissect it off, and then to apply the solid nitrate of silver or some liquid caustic freely; and not only so, but to repeat this process daily, or as often as the adventitious membrane reforms, and in the belief that they are only doing what is absolutely necessary towards giving their patient the best chance of recovery. This line of practice I regard as a woeful mistake. It seems to me that, by so acting, the surgeon is dilgently endeavoring to undo all that nature is attempting to effect toward a spontaneous cure of the malady. Surely no one imagines, that by tearing the exudation off the fauces, he will prevent its extension into the larynx and trachea. Such a procedure seems to me more likely to promote the dangerous progress of the false membrane, to use a phraseology somewhat antiquated. To prevent misconstruction, let me add that no one can object to the removal of sloughy matters flapping loosely in the pharynx.

A recent writer has said that the more copiously lymph exudes upon the fauces and larynx, the less likely is it to be deposited along the interior of the bronchial tubes in croup and diphtheria; and the inference from that is that in such instances tracheotomy is more likely to succeed. This assertion we may not all admit, and, at all events, it has not been established as a fact; but though it were, caustics are not used for the purpose of promoting the deposition of lymph, neither will their free application render the success of tracheotomy more probable.

In the belief, then, that caustics in all forms are injurious in diphtheria, I would venture to recommend their complete abandonment in the treatment of this peculiar but perilous disease.

However improbable it may be that I shall be met with the

objection that my remarks are directed against a practice which does not now obtain, it may be right to state that any one who glances at the weekly and monthly medical journals of the day, will at once be satisfied that such is not the case. In the Edinburgh *Medical Journal* for October last, there is a lengthy article upon diphtheria, the writer of which advocates the use of caustics, even to the dropping of it into the larynx by a tube, and congratulates himself on thereby obtaining complete command of the symptoms. It is also worthy of remark that this practitioner uses iodide of potassium in ordinary doses, a mode of treatment previously proposed and employed by Mr. Wade, of Birmingham. The cases thus treated did not speedily arrive at convalescence—not so speedily as most recoverable cases of diphtheria usually do—and it may possibly yet occur to the writer that he may accelerate his cures by confining his medication to the latter remedy, and entirely excluding the caustics. The same writer mentions a family in which he was attending one diphtheritic patient, where there were five other inmates similarly affected in some degree; and when describing their symptoms and treatment, he says: "I had cauterized and sponged, with the caustic solution, their throats daily, and I had ordered to be taken, for three or four days, ten drops of the tinc. mur. ferri twice daily. Nevertheless, the inflammation of the throat and the effusion of lymph kept slowly, but steadily advancing." In a subsequent page, when speaking generally of treatment, he remarks: "If the patient when I was called, was free from fever, but had his throat affected, I contented myself by touching the lymph with the caustic and sponging the throat, fauces, and glottis with the same solution, and gave the sol. iod. pot. from three times daily to every two hours, according to the urgency of the case. And again, "Where there was the slightest hoarseness, I never failed also at once to drop the caustic solution into the windpipe." Surely a striking example of the *nimia diligentia medicinæ*, and the steady advance of the inflammation and effusion would surprise no one but the writer.

A careful attention to the current medical literature of the day, will convince amost any one that in some cases recovery is not to be ascribed to the local means employed, but rather that it takes place in favorable cases in spite of these means, which can only have the effect of protracting the period of disease, or delaying convalescence. It is perfectly well known to me, that in holding such opinions I do not stand alone, though I fear they are held and acted upon by but a few, not by a minority.

While writing this paper my attention was directed, as previously noted, to a pamphlet entitled "Notes on Clinical Medicine," by Dr. W. F. Wade, of Birmingham, the first part of which relates to diphtheria; and after stating that "local treatment exerts no known influence upon the general course of specific fevers," he continues in a succeeding page as follows:

"It is contrary to the ordinary rules of our art to interfere with the local development of blood poisons, except for special reasons."

"The faucial exudation of diphtheria is to be considered as the local manifestation of a general disease."

"Interference with it will not prevent its reproduction, nor will it prevent laryngeal complication, nor will it prevent the supervention of grave constitutional disorder. It is, besides, exceedingly irksome to young patients."

"We are justified in interfering with the throat exudation when there is excessive fœtor, or when it is so copious as to interfere with respiration or deglutition—not otherwise."

These opinions coincide so exactly with my own in respect to local management, that I have taken the liberty of quoting them; and it may be added, by the way, that Dr. Wade recommends, for constitutional treatment, iodide of potassium, iodide of iron, and bichloride of mercury, with bark, as eliminants of the blood-poison.

Lastly, in reference to syphilis, less requires to be said; for, while it cannot be doubted that caustics are still too frequently applied, and productive of considerable mischief, yet it must also be remembered that their frequent and indiscriminate employment is not sanctioned by the best authorities on the treatment of this disease.—*Glasgow Medical Journal*, Jan., 1864, *p.* 409. *Braithwaite's Retrospect.*

ON THE

HYPODERMIC TREATMENT OF UTERINE PAIN.

By J. HENRY BENNET, M. D.,

Late Physician-Accoucheur to the Royal Free Hospital.

During the present winter I have used, with prompt and marked success, the hypodermic injection in several cases of severe dysmenorrhœa, with or without hysterical complica-

tions, and in several others of uterine and ovarian neuralgia, and of facial neuralgia having an uterine origin. The relief has been obtained in from fifteen to thirty minutes, without being attended or followed by the headache, loss of appetite, or nausea, which are so frequently the result of the use of opiates in any other way, even by injection into the rectum. This latter mode of administering opiates has hitherto been my sheet-anchor iu the treatment of uterine spasms and pain, and is certainly most efficacious; but it is not unfrequently attended by all the above-mentioned drawbacks, from which the hypodermic injection appears to be singularly free. In nearly all the instances in which I have tried this mode of introducing opiates into the system, the sedative result alone has been produced: there has been no subsequent bad effect whatever.

In one case of severe uterine tormina and pain, the result of arrested menstruation from cold, I injected thirty minims of the solution of morphia. In half an hour the pains, which had been agonizing for the previous twenty-four hours, were calmed. A good night's rest followed; and the next morning the menses had resumed their course, and my patient was all but well. In another similar case, the uterine pain was accompanied by severe hysterical symptoms. The injection was followed by the same favorable result—ease, sleep, and rapid disappearance of all morbid symptoms.

Owing to the complete control over the element of pain which the hypodermic injection of opiates appears to give, I have been able to carry on the necessary treatment in an interesting case of uterine disease, which I should otherwise have been obliged to treat under chloroform, or at a great disadvantage. The patient, a young German lady of twenty-four, came to Mentone last autumn, by direction of her medical attendants, with the view of spending the winter in the South. She was considered to be suffering from neuralgia, facial and general, and from nervous irritability of the system in general. She had been traveling with her husband from place to place, from bath to bath, in the search for health, for more than two years. On being consulted, I recognized the existence of a host of uterine symptoms, and found that the neuralgic and nervous illness had manifested itself after a severe confinement, which had occurred about three years ago. The discovery of extensive inflammatory ulceration of the neck of the womb gave the key to the state of ill health. Singularly enough, none of her previous medical attendants

had suspected the uterine origin of the neuralgia. Such cases are always very difficult to treat—interference with the uterine lesion all but invariably rousing the neuralgia. I have repeatedly had cases of the kind that I could only examine and treat locally by giving chloroform to the full surgical extent on each occasion, and this I have had to do twenty or more times in the same patient.

With the patient in question the surgical treatment of the ulceration was borne tolerably well at first, but as the diseased surface became more healthy, and consequently more sensitive, endurance diminished. Every time the sore was touched, severe neuralgia followed, and the general health began to flag. In former days I should have suspended all treatment, and have sent the patient to the country for a couple of months, to allow the nervous system to calm down, and to let nature do her best. In this instance such a course was not desirable, my patient being very anxious to continue the necessary treatment so as to be locally cured before we separated in the spring. I thought, therefore, of the hypodermic treatment, and tried the injection of thirty minims of the solution of morphia immediately after each uterine dressing. This course was attended with complete success; no neuralgia ensued, and I have been able to continue uninterruptedly the treatment now all but brought to a successful issue. On one occasion I omitted the precaution, and was sent for at ten o'clock at night. I found the patient a prey to a most distressing attack of facial neuralgia, which had come on an hour before. She was positively convulsed and shrieking with agony. Chlorodyne, sulphuric ether, &c., had been taken with no relief. I injected the thirty minims of morphia solution, and in twenty minutes she was calm and free from pain. It was repeated next day, and the facial neuralgia has not returned. This lady will no doubt gradually recover her health and get rid of the neuralgia when the uterine disease is thoroughly cured.

In a case of pure neuralgia, attacking first one and then another part of the body, I have injected from twenty to thirty minims of the acetate of morphia solution forty-two days in succession without any unfavorable result. The neuralgia, which was very severe, was entirely subdued by it for about eighteen or twenty hours, when it re-appeared, gradually increasing in intensity until the injection again relieved it. At the end of that long period the pains gave way, the treatment having been either curative, or having allowed the

neuralgic attack to wear itself out. During the entire period of treatment, the patient, a very delicate lady, slept better than usual, ate as well (her appetite being usually bad, and the digestive powers weak), and was able to take part socially in all that was going on around her. No one, indeed, was aware, except her family, that she was suffering from so painful a malady. To my surprise, I was able to suspend the morphia suddenly, without any of the distress and discomfort which is habitually observed when opiates have been long used and are abruptly abandoned.

From what I have seen of the hypodermic system, I believe that its use is capable of great extension in the treatment of pain generally. I consider that the injection of a solution of morphia after any operation would deaden pain, and produce a general calm of the system both soothing and beneficial to the patient. I think also that this result might be obtained in most cases without the usual drawbacks of opiates taken internally.

Some years ago I recommended in the *Lancet* the injection of opium into the rectum, as a means of modifying and even arresting obstinate sea-sickness. Since then various additional cases have come under my notice illustrating its efficacy. The great difficulty to all medication in sea-sickness is the fact that the stomach absorbs fluids with difficulty. By injecting subcutaneously, this difficulty is got over. Moreover, a subcutaneous injection would be managed easier on shipboard than the rectal injection, to which most people have a very natural antipathy.

I have used all but exclusively a solution of acetate of morphia in distilled water. Nine grains dissolved in two ounces of water gives a strength about equivalent to that of laudanum. The liquor morphiæ of the Pharmacopœia contains spirit, and I have found that it constantly occasions small patahes of painful inflammation; without the spirit, on the contrary, it appears to be quite innocuous. A moderate sized steel needle or canula I find preferable to the small gold one. The steel canula is sharper, and passes easier through the skin. By pinching firmly the fold of skin that has to be pierced between the finger and thumb, its sensibility to the puncture is much diminished. It does not seem to matter much, as regards results, in which region of the body the injection takes place. I have principally chosen the præcordial region for uterine and general pain, and for local neuralgia a spot as near to the region affected as possible.—*London Lancet.*

UTILITY OF
ALOES IN THE TREATMENT OF WOUNDS.

Formula of an Aloetic Tincture for External Use.

Aloes is one of the oldest medicines; it enters into a great number of formulas, some of which have been famous for a long time (Elixir de longue vie, Paracelsus Elixir), and others some of which still continue to have a certain amount of credit (Garus's elixir, antecibum pills, etc.). Their number can be conceived on looking over the long list Jourdan gives of them in his *Universal Pharmacopœia*, where, however, the whole of the aloetic formulas are not given. It is, therefore, one of those medicines whose properties are known and appreciated, and about which it would seem there is little to be said. It is scarcely used now-a-days but internally, while it was previously used as much externally as internally. It is not, therefore, useless to recall to the memory of practitioners the uses of this medicine in external therapeutics which have been too much forgotten.

Galen believed aloes applied externally to be an astringent, and stated its properties for closing ulcers. After the Greeks, the Arabs, and a good many therapeuticians who came after them, till the eighteenth century. Geoffrey pointed out aloes as eminently useful in the dressing of wounds and ulcers, and as being susceptible of favoring and quickening their cicatrization, and even of stopping the hemorrhage occasioned by these solutions of continuity. Surgeons in old times used it frequently, eitheir in an alcoholic solution for washing bad ulcers, or as a topic, and mixed with balsamic substances, such as myrrh and incense, in ointments, in balsams, which were used not only in old wounds, but even in recent ones. It entered into the composition of numerous vulneraries, and was thought to prevent suppuration as well as the formation of ulcers, and to promote the adhesion of edges of wounds made by cutting instruments. In these cases the balsam of the Commandeur de Permes, in the composition of which aloes enters, had a great renown. The cut edges were brought together, and over the wound a compress steeped in this compound balsamic tincture was applied. Aloes was also used in

composition of collyria for injuries connected with chronic ophthalmia, as well as in injections intended to modify fistulous openings and to promote their obturation.

All these facts seem to be forgotten now. Scarcely a few authors on materia medica mention them, and, if I am not mistaken, there are very few practitioners who now think of the external use of aloes and of the advantages it may present. It is left to veterinary surgery, which had the good sense not to give it up, and which continues to use it with the greatest advantage as vulnerary in the treatment of recent wounds, as well as for modifying and cicatrizing in the dressing of atonic, sanious, fœtid and resisting ulcers.

It is much less, I confess, after reading the old authors than after having been struck with the rapidity with which the aloetic topics cicatrize wounds in animals, that I thought of experimenting on man, I was not long in discovering that with him they were equally useful. The direction of my studies and the nature of my occupations bring within my reach only a few cases of surgery. I have, however, for a few years got a sufficient number of cases to verify the remarkable cicatrizing properties of aloes. In using the compound medicines in the composition of which it enters, I could not have perfectly appreciated its action. These preparations, more or less complicated, contain balsamic substances, such as myrrh, incense, benzoin, balsams of Tolu or of Peru, which also possess very topic properties that necessarily to a certain extent assist the aloes. I preferred, therefore, using aloes alone, and found it so effectives that in the majority of cases it was not necessary for me to add an adjuvant.

The preparation which I chose for external use is a saturated tincture of alose. The aloetic tinctures were, however, the most valued preparations of the old surgeons. I had, therefore, to support my first trials by the authority of the past; but the formula of these tinctures was very variable, and most of them added at least one other element, balsamical or gommo-resinous. My general formula only contains two elements, alcohol at an ordinary degree of concentration and aloes.

I first of all used one part of aloes to four of alcohol; but I was not long finding out that the more aloes the tincture contained, the more efficaciously it acted on the wounds. I had then to find out in what proportion the alcohol could be saturated with aloes, and I have obtained, with one part of aloes and two of alcohol, a complete solution. On making the dose

one part and a half, a deposit is formed which renders useless part of the aloes.

My formula is, therefore, the following: Aloes, 1 part; alcohol, 2 parts. The aloes must be chosen of good quality; Socotrine aloes is the best for external use as well as for internal; hepatic aloes is still valued in veterinary practice really more for its cheapness than for its special properties. As to the impure aloes, called caballin, it must be altogether rejected.

In order to apply the alcoholic tincture of aloes, dip into it a pencil made of lint, and then pass it over the surface of the wounds; or saturate with it the lint used for dressing the wounds. It is evident that this last mode of treatment is more active than the first; therefore it is the one which must be used in the treatment of atonic wounds which show little or no tendency to cicatrize. The application of the tincture of aloes on the wounds is but slightly painful, and even often, as to the sensation there is no local effect.

In the cases in which this treatment has succeeded with me I will mention particularly bed-sores occurring in patients suffering from typhoid diseases or cachectic, and generally so difficult to heal. I get them exclusively dressed with the tincture of aloes, or I have them painted on their surface or around them with this tincture, I then cover them with styrax ointment spread on lint. Bed-sores very seldom resist either one or the other of these treatments. I have also obtained remarkable success in the treatment of old, atonic, and inveterated ulcers; amongst others I will mention two cases of varicose ulcers of the legs, of several years' standing, and which had not been modified by several other applications; having been dressed with perseverance for about two months with lint saturared with tincture of aloes, these ulcers have ended by cicatrizing in an effective manner.

I believe that this topic would be of great advantage in the treatment of the ulcers which follow burns, and which often turn out so badly. In a thousand ways, I may say, surgical therapeutics would rejoice in the use of aloetic topics, and they would deserve to be rescued from their disuse. The formula of tincture which I have just now recommended would be, I think, the best that could be used; a balsamic ingredient such as benzoin or incense could be added in case of its insufficiency.

It will not be without interest to add that we can daily profit by the cicatrizing properties of aloes in the treatment of

our domestic animals, in the horse, whose services the doctor so often requires. We all know how much this animal is exposed to sores resulting from blows or knocks which he gets in his stable, or from the rubbing of his collar, his saddle, or other parts of his harness. Now, dressings of the saturated tincture of aloes dry up and heal, with great rapidity, the scratches and sores of horses, and prevent them becoming ulcerated. This lesson in vetrinary surgery should not be despised by city practitioners, and less still by those of the country, who take an interest in the useful and courageous animal companion of their peregrinations.—*Dublin Medical Press*, March 16, 1864, from *Bull. de Thèrap.*

PUERPERAL CONVULSIONS SUCCESSFULLY TREATED BY SUBCUTANEOUS INJECTIONS OF MORPHIA.

By PROF. SCANZONI, of Wurtzburg.

Since the attention of the medical profession was first directed by Dr. Wood, of Edinburgh, and more lately by Hunter and Behier, to the advantageous effects of subcutaneous injection, especially of narcotics, Professor Scanzoni has employed this method with success in numerous cases of neuralgia, hyperæsthesia, etc.; but he attaches especial importance to the following case of puerperal convulsions, because it seems to prove, in accordance with the views laid down by Hunter, that the subcutaneous application of narcotic agents furnishes a means of acting on abnormal irritations of the brain with greater rapidity and certainty than the administration of the same remedies by the mouth. It will, doubtless, be admitted that opium, in its different preparations, deserve the first place in the treatment of puerperal eclampsia. In his own experience, the observation of a large number of cases has convinced Professor Scanzoni that a kind of intoxication produced by opium leads with more certainty to a favorable termination than any other means recommended in this terrible disease. But, unfortunately, it is not always possible to administer a sufficient quantity of opium or morphia; sometimes the comatose condition of the patient, at other times the rapid succession of paroxysms, prevents administration by the mouth; and opiate enemata are occasionally rejected as soon as they are received. The subcutaneous injection, however, supplies the means by which these difficulties may be overcome, and a

sufficient quantity of opium introduced into the system to render its effects certain. Numerous experiments have convinced the author that, although the effect of this method is not always persistent (the neuralgiæ, for example, are not always cured by it), yet there are constantly produced—within a very short time, often a few minutes, after the injection—certain phenomena, which can leave no doubt as to the action of the opium upon the brain. Such symptoms are drowsiness, giddiness, headache, sickness, feeling of constriction in the throat, even vomiting, and depression; or, if the dose is large, somnolence. These facts, taken along with the known effects of the subcutaneous application in delirium tremens, mania, chorea, tetanus, etc., induced him to try the same treatment in puerperal convulsions, and with the most satisfactory results. After three injections of the meconate of morphia there occurred only two attacks in nine hours, while previously there had been three attacks in an hour and three quarters. This diminution of the convulsions after the injections is so much the more remarkable, since experience has shown that, as a general rule, the paroxysms become not only more violent, but follow at shorter intervals as the labor advances. And although the author does not imagine that he has ddiscovered in the subcutaneous injection an infallible panacea for this dreadful malady, he is of opinion that the following case should induce physicians to give this means a trial:

Case—D., aged 21, primipara, strong and robust, was brought into the lying-in ward at a quarter to eight o'clock on the morning of June 8th, 1859. Labor had commenced in the night, and she had been seized with nervous paroxysms and loss of consciousness; no account was given of the nature of the attacks; the patient remembered nothing of what had occurred during the night. The whole body, and especially the lower extremities, were odematous; on the right side of the tongue showed marks of being bitten by the teeth; the uterus corresponded to the pit of the stomach, and seemed sufficiently consistent; sounds of the fœtal heart distinct. On examination, the os uteri was dilated to the size of a sixpence, the bag of waters was partly formed, and the head presented; the urine was very albuminous, and exhibited under the microscope numerous fibrinous cylinders. At eight o'clock she was seized with a second convulsive attack, which was of a very marked character, and lasted some minutes. On recovering consciousness, she could answer questions, although slowly. A third attack succeeded at a quarter to

nine, a fourth at a quarter to ten, a fifth at a quarter to twelve, and a sixth at five o'clock—the last the most violent. After the fourth paroxysm consciousness did not return, and the breathing became stertorous. At ten o'clock she was bled to about eight ounces, an enema with twenty-five drops of laudanum was given, the body was put into a warm bath, while cold irrigation was applied to the head. As opium could not be administered internally, a solution of the meconate of morphia was now, at three different times, injected under the skin, the quantity amounting in all to about ten grains (seventy-five centigrammes) of opium. The labor advanced very slowly. At three o'clock next morning the membranes burst; the os dilated to the size of a half crown; the head still high up above the brim; sounds of the heart very distinct. After this period the dilatation went on more quickly; at seven o'clock the os was larger than a crown piece, very extensive and dilatable, the head high up and immovable; complete loss of consciousness, profound coma. In these circumstances, which left little hope of saving the patient, and in spite of the high position of the head and the incomplete dilatation of the os uteri, it was decided to employ the forceps. Their application was by no means easy, but the extraction presented no difficulty. After a few tractions, a fœtus was born, which breathed feebly at first, but soon began to moan vigorously; the placenta followed. During the operation there was no paroxysm. Some wine and ten drops of tincture of amber and musk were now given to the patient, which revived her a little, but did not restore consciousness. At eleven o'clock, a seventh attack came on, but was slight and short; after which she became excited and tried to escape, but towards morning she grew calm. At nine in the morning she could answer questions put with a loud voice. During the whole day she remained like a drunk person; pulse 128. The musk was stopped; nothing but lemonade given. Towards evening the abdomen was somewhat painful. During the night there were several slight attacks of mania; she constantly attempted to escape. In the morning she answered rationally; pulse 108. The œdema had diminished, the abdomen was still tender; there was difficulty of breathing; and numerous râles, fine and coarse, in the lungs. Warm bath, lemonade, expectorants, were prescribed. In the evening the patient was completely herself again; pulse 132. June 11th and 12th—She slept well during the night, the expectoration becoming easy, and the pain of the abdomen relieved by fomentations and poultices; pulse 120; the urine

contained little albumen, and no fibrinous cylinders. June 13th—Good condition; œdema gone; abdomen soft; some incontinence of urine during the night, was relieved by leaving in a catheter. All medicines were now suspended; the patient was put on good diet, and ordered to take every morning a glass of chalybeate mineral water. On the 17th there was no albumen found in the urine, and on the 21st the patient left the hospital with her child, being advised to continue the use of steel for a considerable time.

THE LA POMMERAIS CASE.

A homœopathic practitioner of Paris, named La Pommerais, has been lately condemned to death for the murder of his mistress, who he had previously induced to insure her life in different offices to the amount of one hundred and ten thousand dollars. The payment of life insurance, in this case, has given rise to very interesting medico-legal questions.

First, it may be asked whether the sum for which the life of the victim of the charlatan Pommerais was insured, will have to be paid over to her children, and, secondly, whether the transfers executed by her in favor of La Pommerais are valid, and his representatives will have any claim on the companies. The insurances, it is contended, will be available for the children of the murdered woman. It is established, and the companies have not, it is believed, disputed the fact, that they did not sign the contracts drawn up in her name and for her behalf without having taken all the preliminary steps usual in such cases, and obtained all the information respecting the insurer when they covenanted to pay a specified sum. The conditions of the contract between Madame de Pauw and the companies were fulfilled so far. She had been visited by the companies' medical officers, who reported that her health was excellent, and that the insurance might be safely effected; and the first premium was punctually paid. The policies of insurance specify only two cases were insurance companies may refuse payment—suicide or death in a duel; but when the party insured is murdered, his or her heirs must not suffer by the crime of a third party, nor are the companies released from their engagements. It was the woman's life that was insured, and not La Pommerais's; and in no case would the latter make anything by the transfer of her title to him, as it was shown to be obtained by fraud.

THE CALABAR BEAN.

PHYSOSTIGMA VENENOSUM.

The want of a remedy has long been felt which would more thoroughly act as an antagonistic to atropine and other mydriatics than opium or ergotine, in producing contraction of the pupil. This agent has been found in Calabar bean. The drug was first mentioned by Christison in 1855; but only its action when taken internally had been examined. Professor R. Fraser, also of Edinburgh, drew attention eight years afterwards to the myotic qualities of the remedy. And we copy the following from his remarks:

The plant from which the beans are obtained is a runner, growing wild in West Africa, and is gathered by the negroes, who employ it as an ordeal for criminals. The population of Calabar is estimated at one hundred thousand, and of these upwards of 120 are reckoned annually to be sacrificed by this poison.

These so called beans average rather more than an inch in length, and are irregularly reniform, having the appearance of a somewhat flattened fusiform body bent on one of its edges.

As obtained from Calabar, the beans have a grey color, and are encrusted with earthy matter; this is readily removed by washing, and a somewhat shining integument is exposed of various shades of brown, ranging from a light coffee to an almost perfect black.

While the other parts of the plant are indifferent, as it seems, to the animal organism, the beans have strongly poisonous qualities. According to the missionaries, those who have eaten them, first feel a violent thirst; afterwards, the poisoned individual cannot swallow; mucus flows from the mouth; convulsions; and also cramps in the back, come on, etc. During all this, the patient is conscious of everything, and even the language remains up to shortly before death, which may ensue within half an hour. Sometimes vomiting occurs, after which the heat diminishes; and, except headache, all other symptoms disappear.

Small doses (up to 12 grains) with which Christison made his experiments, soon caused an increasing pain in the epigastrium, with retching, a sentiment of dyspnœa, cramps in the muscles of the breast, vertigo and weakness in the limbs, great secretion of saliva, and irregular, slow motion of the heart, so that in one case the pulse made only 20 beats.

Applied locally to a rabbit, the alcoholic extract produced loss of contractility. And when the intestines were painted over with a solution, they ceased to move.

In order to examine the local action of the remedy on the eye, Robertson prepared an extract from the pulverized bean, which he dissolved in alcohol in three different concentrations. The weakest solution was produced by extracting 30 grains of the bean by alcohol, evaporating to desiccation and dissolving the rest in one drachm of water. Thus a dirty light red-brown fluid was obtained. By further extracting and evaporating, a four times and an eight times stronger extract were obtained. After R. had examined his eyes, and found that his pupils were 2 lines in diameter each, and with each eye Jager's No. 1 was read at 5 inches distance, he put a drop of the weakest solution in his left eye, which did not produce any more irritation than a drop of water. After 10 minutes, objects at a distance of one foot became indistinct; at the same time all objects seemed larger and nearer. There existed also a sensation of tension in the eye, as if very minute objects had been assiduously looked at. Both pupils were yet equal in size. After twenty minutes the left pupil had only a diameter of 1 line; objects further distant than 9 inches appeared dim; every thing looked at seemed larger and nearer. The right eye was normal. After 30 minutes the left pupil was only $\frac{3}{4}$, the right one $2\frac{1}{2}$ lines in diameter. The far-point of the left eye 8 inches. After 50 minutes the left pupil was $\frac{1}{2}$ and the right one 2 lines; a sensation of pressure and fatigue became manifest, when the subject of the experiment attempted to read; objects at 10 yards distance were recognized with difficulty. After 6 hours the left pupil was 1 line, the right one $1\frac{1}{2}$ lines; both reacted on light. After 12 hours the left pupil was $1\frac{1}{2}$, the right one $2\frac{1}{2}$ lines in diameter. The following morning both pupils showed yet a slight difference and the left eye was somewhat weak.

Bowman, who has also experimented on his own eye, as stated by Wells, says that after 5 minutes he felt a strong tension in the neighborhood of the ciliary body, as if something crept about there. After 10 minutes this sensation had yet increased, and he felt also some lancinating pain. After 15 minutes the near-point was at the left side $6\frac{3}{4}$ inches, while in the right eye, to which nothing had been applied, it was removed to a distance of 15 inches. The far-point seemed equally distant in both eyes. After 20 minutes No. XVII Jager was seen at 15 feet, but the letters oscillated; they dis-

appeared and returned alternately. The left pupil was then contracted to the size of the head of a pin, remained in this state for 18 hours, and in the course of three days again became normal. With this dilatation the reaction of the pupil on light again became noticeable on both eyes. Twenty-five minutes after the application there existed astigmatism: the vertical staffs of a window appeared perfectly distinct at a distance of from 6 to 10 feet, while the horizontal ones seemed dim and angular. This was remedied by a concave cylindrical glass of 14 inches focus. With a cylindrical glass of 50 inches focus distant objects appeared palpably smaller. This astigmatic state was yet found 18 hours after the application.

De Graefe has tested the new myotic on 9 healthy persons. The average time for the setting in of contraction was 14 minutes with the weak, 12 minutes with the strong solution; the duration of contraction with the former 2, with the latter 3 days; the maximum of contraction lasted from 6 to 18 hours. The altered state of refraction, *i. e.* the cramp of the muscle of accommodation and the approach of the near-point, lasted much less in Graefe's experiments: it reached its height in 10 minutes, and remained there but from 10 to 20 minutes. The apparent increase in the size of objects and change of illumination were also observed; the acuteness of vision was reduced from 1 to $\frac{2}{3}$. Ophthalmoscopically there appeared no change of circulation. In a patient who had no iris, but good vision, the action on the ciliary muscle was also manifest. Experiments on birds showed the action of the drug on the pupil of these animals to be very brief; on amphibia and fishes the remedy remained without influence. De Graefe also satisfied himself that atropine is a much more powerful irritant in an opposite sense than the Calabar bean. The latter is not capable of contracting the pupil after it has just been dilated by atropine; the action of the latter also again appeared, when in an atropinized eye the Calabar bean had for a short time produced a medium degree of contraction. When the pupil had first been contracted, atropine always acted, but somewhat slowly. The remedy acted also on the iris, when it was abnormal but not totally atropic, in glaucoma and in a case of fistula of the cornea.

From all hitherto published experiments, it results that the Calabar bean first produces a subjective sensation of tension in the ciliary body, which may be recognized also by the determination of the near-point and the range of accommodation; that it also causes contraction of the pupil; that the

contraction reaches its height in the course of an hour; that the iris loses during that period its contractibility; and that the dilatation to the normal size from this contracted state requires less time than the contraction of the pupil, when dilated by atropine (the latter circumstance probably depends on our incapacity up to the present time to extract entirely the active principles of the bean.) Simultaneously with the tension of the ciliary body occur the symptoms of myopia with a small range of accommodation, and of astigmatism. The remedy, therefore, acts by producing a cramp, by irritation of the ciliary branches of the oculo-motorius, in the ciliary muscle and sphincter of the pupil; it does not paralyze the dilatator pupillæ, as otherwise it could not produce complete contraction in a previously dilated pupil. It is, consequently, in so far an antagonist of atropine as the latter irritates the dilatator of the pupil.

Therapeutically the remedy will find the following applications: 1. Perhaps in retinitis, with great sensibility to light, in order to moderate the admission of light. 2. In mydriasis, consecutive in some cases to debilitating diseases (typhus, diphtheritis, etc.), and to injuries. 3. In ulcers at the margin of the cornea, in order to avoid incarceration of the sphincter of the pupil after perforation. 4. In artificial mydriasis, in order to do away with the dazzling, which is very disagreeable to the patients after having been examined by the ophthalmoscope, particularly if they have but one eye. [To these indications may be added the following: 5. In those corneal opacities with a transparent centre, which produce, when the pupil has its normal size, dazzling by diffusion of light. 6. In similar circumscript opacities of the crystalline body, situated near the centre of the latter, and in dislocations thereof. 7. In abnormal mobility of the lens, with a tendency to fall into the anterior chamber. 8. For the discovery of simulated amaurosis, the pupil being dilated with atropine. 9. In wounds of the cornea and sclerotic with a recent prolapsus of the pheripheric part of the iris. 10. Perhaps in diseases of the ciliary body.]

E. Hart recommends a solution of the extract of such a concentration that one drop shall contain the extractive matter of three grains of the crude drug. He furthermore says that the alcoholic extract is soluble in glycerine, and that this solution is more durable than the watery one, which after a few days becomes decomposed.—Geissler. *American Jour. Ophthalmology.*

ON THE

TREATMENT OF ALBUMINURIA IN CHILDREN.

[At a recent meeting of the Royal Medical and Chirurgical Society a paper was read on this subject by Dr. W. H. Dickinson, of which we copy an abstract and the discussion following it, from the *Medical Times and Gazette.*]

The granular kidney appears to be unknown in childhood. The only form of disease which produces albuminuria at this period of life is that which produces enlargement of the kidney and gives it a smooth mottled exterior. This is, in fact, a renal catarrh. The tubes become obstructed by an excess of their own epithelial growth, and hence arise all the evils of the disease. If only there is a free escape for the contents of the tubes the vascularity of the gland will be relieved by secretion, and the disorder will soon be at an end. The principle of treatment must be to send as much water as possible through the organ. This fluid is devoid of irritating properties, and probably passes through the gland rather by filtration than true secretion. With these views the patients were restricted to a fluid diet. They took from two to four pints of distilled water daily, and small doses of the infusion of digitalis. When the active symptoms had subsided iron was given. Twenty-six cases were adduced in which this treatment had been pursued. Twenty-two recovered completely; three were lost sight of while improving, but while still having a small quantity of albumen in the urine; one case did badly, and eventually died under other treatment. Many of the cases were of great severity. These results appear better than those afforded by other methods. Among the in-patients at the Children's Hospital otherwise treated, 11 died out of 39; and of 69 cases treated by Dr. Miller in Dispensary practice, 8 died. It was found that on an average the little patients were restored to apparent health in 30 days, while 15 days more were needed to get rid of the last traces of albumen. The use of the water did not seem in any case to increase the dropsy, but the contrary. It was usual, however, when the swelling was great to let the digitalis set up a certain amount of diuresis before ordering the full quantity. The subsequent use of iron was believed to correct the effects of the disease, without influencing the disease itself. On the

occurrence of secondary disorders, such as convulsions, or acute inflammatory attacks, it was argued that the treatment of the renal mischief should be sedulously persisted in, with such additions as might be called for. The anæmic state of brain in uræmic convulsions, and their frequent occurrence after the exhaustion of diarrhœa or vomiting, were urged as reasons for abstaining from depressing remedies. A case was cited in which, under these circumstances, small doses of opium had been used successfully. A case was also given in which acute pleurisy had passed off under the use of only local measures. The paper professed to deal only with the albuminuria of childhood.

Dr. Fuller had had opportunities of witnessing the author's treatment, but chiefly in adults, in which it was not so successful as in children. In adults the renal affection was of longer standing. He had tried it in a child in private with success. It was successful in the dropsy of adults, but not so uniformly so as in dropsy in children after scarlet fever. If Dr. Dickinson's views were correct it was easy to understand that it should be more useful in children than in adults.

Dr. Basham said there were many points of practical value in the paper, and yet one or two things for comment. First, in cases where the renal affection followed scarlet fever let the treatment be what it might, the majority of patients did well. No doubt the diuretic influence of water was beneficial, but he thought the theory brought forward was open to a difference of opinion. He ventured to think that there was not merely a blocking up of the tube, but also some change of the gland-cells—they had become effete cells, and accordingly were thrown off, and these, of course, obstructed the tube. But we know that nature tries to get rid of them, and no doubt diluents are of help in this way. He should, however, think the natural tendency of such cases to do well had more to do with recovery than the treatment.

Dr. Hillier had tried Dr. Dickinson's plan, and had found it scarcely so satisfactory. He (Dr. Hillier) agreed with Dr. Basham, that such patients, however treated, if seen early, would nearly always do well. His plan of treatment was to keep them in bed, to use hot-air baths, to give purgatives and good diet. Occasionally he had under care a severe case, and then had tried the water plan, but had been obliged to resort to other means. Perhaps, however, he had been too timid. In one case purpuric symptoms came on. There was considerable hæmaturia and epistaxis. With the water treatment the

patient did worse, but when it was given up and gallic acid administered, the patient recovered.

The Author, in reply, said that he was quite aware that the majority would get well if left alone, but a great number would not. He had been able to collect a large number of cases of deaths in the post-mortem books of St. George's Hospital. In reference to Dr. Basham's remarks, he said the first changes were, he believed, in the quantity and not in the quality of the epithelium. In reference to Dr. Hillier's want of success, he would fall back on the explanation which the Dr. himself had suggested, viz., that the treatment was not persevered in. The only fatal case in the paper was the one in which the vapor bath had been used.

Mr. Bainbridge asked if the treatment would have been equally successful without the digitalis? He had seen many such cases during the last month, and the patients generally were thirsty, and, as a consequence, without any special direction, drank a great deal of water.

The Author said that the water treatment had been tried alone in three cases.

Dr. Stewart related a case of dropsy following scarlet fever occurring in a woman who had recently been confined. Suddenly convulsions came on, followed by unconsciousness. Cupping the loins, and other measures were followed by success, and he thought it a case in which the use of diluents would not have led to an equally favorable result.

Dr. Basham said that he thought that if any pathologist well versed in the use of the microscope would examine the gland-cells of the kidney of a child who had died by accident, and then those of one who had died from renal disorder, he would find a well-marked difference. In the latter the cell was cloudy, and the nucleus obscure. It had become an effete and imperfect cell.

Dr. Fenwick said that he had examined the mucous membrane of the stomach in scarlet fever patients, and had found changes in the epithelium there as well as in that of the kidney.

In reply, Dr. Dickinson said that no doubt there was a change in the cells, but not primarily.—*Boston Med. and Surg. Journal.*

ON SPURIOUS DIPHTHERIA; ITS NATURE AND TREATMENT.

Much confusion is often caused, and many hindrances to the advancement of medicine are thrown in the way, by a loose and indiscriminate application of names; it ought, therefore, to be the aim of every one who has the interests of his profession truly at heart, to attain to the clear and distinct ideas as to the nature of disease, so that he may at all times think, and judge, and act, with precision. And one way in which he may assist in clearing up matters is, by studying diseases which are allied to each other, and by carefully observing and pointing out the distinguishing characteristics of each.

My object at present is to direct the attention of the profession to an affection which, in many respects, resembles diphtheria, and may be mistaken for it, but which, it will be found, differs essentially from that disease, both in its nature and its results.

During the prevalence of an epidemic, it is usually noticed that there is a strong tendency to a particular form of disease. When cholera prevails, for example, there are always many cases of severe diarrhœa and vomiting, which get well, and the true characteristics of the epidemic affection never become fully developed; in these there is a tendency to cholera, but it would be a misapplication of terms to call them real cholera cases, and so it is, I believe, in epidemics of diphtheria. Throat affections have a tendency to take on this form of disease, and many, many cases which are called diphtheria, and are even treated as diphtheria, are, I am convinced, merely examples of the affection I am about to describe.

How otherwise can we account for the apparent success of one practitioner in his treatment, and the total failure of another?

We hear of one man curing his diphtheria cases with one remedy, while another is equally successful with something totally different; but only let the boasted remedies be applied to a really serious case of true diphtheria, the diphtheria which Bretonneau studied so thoroughly, and has so graphically described, and I am convinced they will turn out to be utterly impotent and useless.

It is of importance then to distinguish between the two affections, and I shall now endeavor to sketch the characteristics of spurious diphtheria.

In the course of a recent outbreak of diphtheria, my attention was drawn to a certain class of cases which, while they presented some of the symptoms of that affection, never assumed such a serious nature, or called for such a vigorous plan of treatment, as did those which had previously come under my case.

In the class of cases to which I allude, the patient usually complains first of a curious feeling in the throat, as if a pin were pricking it; there is languor, with pains in the back and legs; and sometimes considerable tenderness on pressure on the outside of the throat, just under the angle of the jaw.

On looking at the throat, the tonsils and uvula are more or less tumefied, according to the severity or mildness of the case, and of angry red color, while on their surface small, irregularly shaped, yellowish white spots will be observe l.

The spots are evidently of an aphthous nature; there may be only one or two on the tonsil or on the uvula, or they may be so numerous as to give to the soft palate an appearance as if some one had shaken a box of white pepper over it.

However great their number may be, I have observed that their edges do not coalesce, each spot is isolated. They never look excavated, but seem as if they just floated on the mucus which moistens the throat.

The appearance of the tongue usually indicates derangement of the digestive system, and the pulse is smaller and more frequent than in health.

The treatment of spurious diphtheria is exceedingly simple —a mild aperient, the tincture of the muriate of iron, in doses of ten or fifteen drops thrice a day, with a simple gargle of chlorine water, will certainly and speedily cure the throat affection. There may be a good deal of prostration and muscular debility after an attack of this disease, but a liberal diet and the use of stimulants, if necessary, will soon restore the patient to health.

Aphorisms.—Spurious diphtheria, so far as my observation has extended, never proves fatal. Though accompanied with debility, I have never seen it followed by paralysis or albuminuria; the tonsils sometimes suppurate after an attack. A patient who has suffered from this affection may subsequently be attacked with true diphtheria.

In true diphtheria gargles are of very little use till the patient begins to recover, but in the disease under consideration their use is always followed by the greatest benefit from the very first. In spurious diphtheria the use of caustic is not required. I do not know how to account for it, but this affection seems to be most prevalent amongst young females.—*Pacific Med. and Surg. Journal.*

WEIGHT OF THE LUNGS.

By H. ALLEN, M.D., Asst. Surg. U. S. A.

In a series of post-mortem examinations, 200 in number, made at the Lincoln General Hospital, Washington, D. C., during the past eighteen months, the weight of the various organs was carefully noted. It has since been suggested that the conclusions drawn from the weighing of the lungs in these cases be recorded, since anatomists have paid but little or no attention to the subject.

Out of the 200 pairs of lungs 68 were found healthy. The smallest weight of any of this number was observed in a case of chronic diarrhœa; the right lung weighing but 8½ oz., the left 9 oz. The largest weight was seen in a case of diphtheria the right weighing 20 oz., the left lung 18½ oz. The average weight of the whole number was, for the right lung, 15⅛ oz., for the left lung, 14½ oz. In 7 out of the 41 cases of chronic diarrhœa, the lungs gave small weight. The aspect of the organ in these cases was peculiar. They were shrunken, and occupied but a small portion of the thoracic cavity; the distance between the anterior thoracic wall and the lung being in some specimens as great as 2½ inches. The parenchyma was dry, with little bronchial secretion evident, and no appearance of the pinkish hue of the healthy lung was presented. Owing to the absence of blood and the presence of pigmentary matter, the tissue was everywhere of a greyish color. The remaining 132 specimens were diseased; the majority from pneumonia and pleurisy. A large number were congested and rendered heavy, the parenchyma being charged either with the sero-sanguineous fluid of commencing pneumonia, or the greyish œdema of imperfect convalescence from the same disease. It would be uninstructive to give the weight

of the lungs in each case, since no two specimens were alike; they varied greatly in the degree of complication of the congestion or consolidation. The heaviest organ was observed in a case of nearly complete double pneumonia; in which the last stage of red hepatization was attained in both lungs, with the exception of the apex of first lobe, left side, which crepitated under pressure. The right lung weighed 50 oz., the left 52. The smallest weight of any diseased lung was noticed in a case of phthisis, in which the relative weight of right and left lungs was as 8½ oz. to 7½ oz. The first 75 of these weights were recorded under the auspices of Assistant Surgeon G. M. McGill, U.S.A., the remainder by myself. The examinations were all made shortly after death, and it is believed that no decomposition had taken place in any of the specimens.—*Am. Med. Times.*

Foreign Bodies in the Ear.—For the removal of foreign bodies we should first employ only the gentlest means, such as syringing the ear with warm water; and by this, substances of the most different form and composition—even lead pencil—may be removed. Beyond a bent forceps, an ear-scoop with a long handle, and a small corkscrew, almost all the instruments recommended for this purpose are more or less toys or dangerous. By means of the corkscrew, wadding and similar soft substances may be easily drawn out; and in many cases we can remove bodies by passing the ear-scoop behind them. We should never employ force, and never should pass any instrument a line further into the meatus than we can follow it with the eye. For want of such a precaution many a patient has lost his life or his hearing. The first effect of rough procedures is to make matters more obscure, the bleeding and swelling which ensue rendering complete inspection impossible If the gentlest endeavors (or syringing), during which the eye guides the hand, do not succeed, the body should be left in the ear—aye, even were it a dagger's point; and strong as the expression seems, the author justifies it be reference to cases on record in which pointed bodies have remained for years in the ear with impunity. It is not meant to be said that bodies should in general be left in the ear, but that matters should not be made worse than they are by violent manipulations. Leaving the body in the ear, then, warm-water syringing and soft poultices are to be daily resorted to, until the ensuing suppuration loosens it and gives it a new direction. —*Dublin Med. Press*, Jan., 1864.

Antidotes for Strychnia.—Professor R. Bellini, after conducting a long series of experiments on poisoning by strychnia and its salts, arrives at the opinion, that the best antidotes are tannic acid or tannin, chlorine, and the tinctures of iodine and bromine. Chlorine, he maintains, attacks the strychnia, even when it is diffused through the system, for he found that in rabbits poisoned with the sulphate of the alkaloid, on being made to inhale chlorine gas in quantity, such as was not sufficient in itself to kill, the convulsions were retarded, and were milder when they occurred; death was also less rapid. The author further observed, that when strychnia was exhibited with pyrogallic acid, convulsion was retarded for the space of half an hour, by comparison, with other experiments in which the alkaloid was given by itself. Professor Bellini believes that this arrest in symptoms is not dependent on acid acting chemically on the strychnia, but only through the astringent effects produced by the acid on the mucous membrane of the stomach whereby the absorption of the poison is rendered difficult. The same author, dwelling on the frog-test for strychnia, asserts that this test is not to be trusted, inasmuch as other poisons produce the tetanic symptoms, although in a lesser degree.—*Brit. Med. Jour.*

—The Royal Society for the Prevention of Cruelty to Animals, offers through the London *Times* a prize of fifty pounds for the best essay on the vivisection of animals, under the following propositions: 1st. Is it necessary to give dexterity to the operator? 2d. Is it necessary or justifiable for the general purposes of science, and if so, under what limitations?

A Cause of Bronchitis.—It has been found, in France, that the use of threshing machines has produced an immense amount of bronchitis and disease of the throat among the laborers employed, who are exposed to an atmosphere charged with dust, which affects them so powerfully, that in some parishes there are whole families of confirmed invalids. An order has been issued that the laborers employed near these machines must work in veils.

The Tomb of Hippocrates. — According to an Athenese journal, this tomb has been recently discovered near the village of Arnaoulti, not far from Pharsalia. An inscription leaves no doubt as to the identity of the original inhabitant of this sepulchral structure. In the interior were found a gold ring in the form of a serpent, the antique symbol of the curing art, a small chain and band of the same metal. A bust in bronze was also discovered, which is presumed to be a likeness of Hippocrates. These objects, together with the inscribed stone, were given, by the Turkish inhabitants of the district to Hourni Pasha, Governor of Thessalp, who forwarded them to Constantinople.

An Association of American Ophthalmic Surgeons.—In accordance with arrangements previously made, a convention of gentlemen devoted to Ophthalmological science and practice was held at the New York Eye Infirmary, during the late meeting of the American Medical Association. Dr. Delafield of New York, presided, and delegates were present from various parts of the United States. It was voted to hold the first annual meeting in the city of New York on the second Tuesday of June, 1865.

Proportion of Births to Population.—The proportion of births to population in various European countries, is given in a blue-book of "Statistical Tables relating to Foreign Countries." In England and Wales the annual births are 1 in 28 persons; 1 in 30 in Belgium, Holland and Norway; 1 in 32 in Sweden; 1 in 33 in Hanover, the Hans Towns, and Denmark; 1 in 34 in Greece; 1 in 38 in France; 1 in 26 in Wurtemburg; 1 in 25 in Russia; 1 in 24 in Austria, Saxony and Prussia; and 1 in 23 in Poland.

Iodide of Potassium and Belladonna in Rheumatism.— Dr. White, of Summit Hill, Penn., states in the *Med. Repor-*

ter, that he has used the iodide of potassium and tinc. belladonna with good results in acute rheumatism. He gives a teaspoonful of the following mixture every four hours, iodide potass., ʒ ij, tinct. belladonna, ʒ ij, aqua cinnamoni, ʒ ivss. This forms a very good alterative and anodyne, but the dose is too small.

Ligature of the Femoral Artery for the Cure of Elephantiasis of the Leg and Foot.—The N. C. *Med. Journal* says:—"Dr. J. L. Ozier reports (Charleston *Med. Journal*,) a case of elephantiasis of the leg and foot, of enormous size, which had existed for five years, in a negro man, 26 years of age, in which he applied a ligature to the femoral artery. At the time of the report, three months since the operation, it is stated that 'the leg and foot have subsided to very nearly their natural size.'"

Discoverer of Anæsthesia.—A pamphlet of fifteen pages is in circulation, setting forth the claims of Dr. Horace Wells, of Hartford, Conn., as the real discoverer of anæsthesia. The evidence, to say the least, is very much in his favor.

—Robert M. DeWitt, of New York, has in press, and will publish in a few weeks, a new work on "Morbid Tumors," by Rudolph Virchow, Professor of Pathological Anatomy, Berlin.

Obituary.—Died, at Pinkhill, near Edinburg, June 17th, 1864, aged 52, James Miller, M. D., for 22 years the able Professor of Surgery in the Unviersity of Edinburg, and author of a well known system of Surgery.

—The daughter of Priessnitz, the founder of cold water cure and a non-believer in vaccination, recently died in Kaschau of small-pox.

—From a comparison of the statistics of 21 nations in Europe and America, it appears that one blind person is found among 1267 persons. The limits are: in America, 1 in 2489; in Norway, 1 in 540.

—Messrs. Sangman & Co. announce the publication of an abridgement of Copland's Medical Dictionary, brought down to the present state of Medical Science by the author. And Comparative Anatomy and Physiology of Vertebrate Animals, by Prof. Owen. Mr. R. B. Carter has translated Zander's "Ophthalmoscopi: its varieties and uses," from the German.

—The most recent excavations of Pompeii have yielded, besides a bronze statuette of Silenus, another most important discovery. Hitherto, no well with water had ever been found in Pompeii; during these excavations, however, a subterranean room was laid open, with a well 25 mitres in depth, in which the most excellent drinking water was found.

The Negro in Disease.—In the department of the South there are a number of regiments of colored troops, and it is a well ascertained fact that they are more liable to disease, and that the mortality is greater than among the white regiments. They rarely ever recover from a severe wound, and when attacked by disease they seem to care but little for life, and die in spite of all remedies and attention. These facts are particularly true of the North Carolina and South Carolina colored soldiers, the sick reports of which are fifty per cent. larger than those of the white troops; and I find, on referring to my notes, that there were, during the months of November and December, thirty-eight deaths from disease in thirteen regiments, three of which were colored. The latter lost seventeen men of the thirty-eight. The colored troops recruited in the Northern States do not suffer to the same degree.—*Dr. Goss, in American Medical Times.*

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ORIGINAL COMMUNICATIONS.

ADDRESS INTRODUCTORY TO THE TWENTY-SECOND ANNUAL COURSE OF LECTURES IN RUSH MEDICAL COLLEGE.

By DE LASKIE MILLER, M. D.,
Professor of Obstetrics and Diseases of Women and Children.

[Published by Request of the Class.]

Young Gentlemen, Members of the Class:—

The occasion which has convened us this evening is one of no ordinary interest—to you, in view of the labors which you are undertaking, and in the associations which you are about to form—many of which, we trust, will go with you through life, bearing with them pleasing memories of the present; to your instructors in the new relations now established, by which, to some extent, we assume the responsibility of the proper improvement of your time while these relations exist. These circumstances ever render the first meeting of a medical class interesting.

It is not, however, the interest of idle curiosity, nor the

novel circumstances which surround you on first entering a medical college, which shall suggest my theme for the short time that I may detain you this evening. I remember that you are students—that you are to become medical scholars—thus I am admonished that you are here for a purpose; you would be qualified to act some honorable and useful part in the world's great drama. I speak of the progress of the race—of the conflict of mind with mind—by which the arts and sciences are carried forward to increasing usefulness and perfection, and by which our civilization is advanced and rendered practical in elevating and blessing society. To live, at the present time, involves great responsibility; life is active, earnest, real; it has become intensified in a thousand ways, so that the individual owes it to himself and to society, to put forth his best efforts in the great cause of humanity; and this he must do or consent to be distanced in the race of life; for in the on-rushing car of human progress, no standing room is left to idlers—no sleeping room for dreamers.

All who are only tolerably familiar with the modern achievements of medical science, will unhesitatingly concede that this general statement of the progress of events is not less true when applied specifically to the profession which you have chosen. In entering upon its labors and responsibilities, you will do well to emulate the example of the many worthies who have ascended to pre-eminence in our ranks by the awards of labor and of merit.

You have but entered the unbounded and ever-expanding field of responsibility, of usefulness, and of pleasure, whose outskirts you may never reach, but whose development, in a great measure, is in your own hands. *Mark well*, therefore, your beginnings, with each step of your progress in the formation of your mental, moral and professional character, in each of which, be assured that, industry, enlightened reason and purity of life are essential to success.

Possessing and exercising these, the ultimate result of your exertions is no longer problematical. On this foundation you

may rear a superstructure that shall command the admiration of all men for its symmetry, strength and utility, the materials for which are already offered to your hands, in the physical sciences, in the experience and contributions of ages. As if you were passing along some vast apartment filled with the most exquisite productions of genius and art, you have but to reach forth and select from the vastness and variety around you the material suited to your purpose. Your embarrassment will not arise from, where to find, but, what to choose. Even the most gifted, who have enjoyed the highest advantages, are forced to confess that they stand on the shore of the great ocean of knowledge, collecting a few pebbles and shells, while its depths have not been sounded nor its boundaries reached. A single branch of learning offers labor sufficient to occupy the longest life. This is especially true of the science and art of healing.

It is not my purpose to pronounce a panegyric on the science of medicine, but rather turn to topics which, if less inviting, still possess a practical interest for you at the present time.

You visit this city for a common purpose, many of you have left, in the distance, pleasant homes and dear friends, that you may avail yourselves of the advantages which we offer, to prepare for the arduous duties of the physician. I do no injustice to any when I assert that skill in the art of healing is not insured by the advantages within the reach of the individual.

The example is not solitary, of a student, surrounded by all the aids to mental improvement, added to the virtuous habit of a reasonable amount of industry, which, by being injudiciously applied, yield but a record of wasted years, and a mind void of understanding. A medical education is not to be acquired, as the air we breathe, by inspiration, nor does the mind become stored with useful knowledge as the sponge is filled with water. If any have cherished this vain deceit, the ordeal of experience will surely and sadly prove, that

when weighed in the balance such will be found wanting. I would disabuse the mind of the false notion, that nothing more is necessary for you, but to sit passively on those seats, and inhale the atmosphere of the medical college to improve the mind and develop the intellect.

Are you sure that you comprehend the import of the terms, when we speak of the improvement of the mind and intellectual development? or the means by which these may be best attained? Too often the mind is regarded as some great indefinable, incomprehensible entity; requiring for its growth and development only to be surrounded by folios, quartos, and octavos; a greater fallacy could hardly be entertained.

The elementary constituents of all knowledge consist in a three-fold operation, the objective, the subjective, and impersonal. Objective ideas arise in external facts, the subjective in registered impressions, the impersonal issue of pure reason, as, for example, the abstract truths of geometry, and are, therefore, to be attributed to the essential nature of the intellect.* On the faculties of perception, memory and comparison depend our ability to judge of facts and things, and hence the avenues to the understanding are mainly through the special senses.

The necessity to the physician of possessing and preserving the senses intact thus appears evident, for how shall he who is deprived of vision ever appreciate the signs of disease which are presented to the eye alone? He cannot discriminate the different eruptive diseases, or detect the line on the gums which indicates lead poisoning, nor estimate the value of the ever-varying expression of the countenance in disease. It is related of a late eminent surgeon that, so thoroughly had he studied the physiognomy in disease, he required little else to diagnose the affection of his patient. Being called in consultation in an obscure case, he observed the countenance of the patient but for a moment, and immediately enquired, "Where is the abscess?" Subsequent examination revealed a large

* Draper's Physiology.

collection of pus which had been unsuspected. Nor can the deaf man ever avail himself of the nice distinctions of sound, which the march of science has made to reveal the secrets of the breast. Nor can he whose fingers are cased in horn ever cultivate the sense of tact so necessary to the physician and surgeon. In vain would he attempt the acuteness of Thabit Abrahim, of whom it is related that, by placing his finger on the artery for an instant, he could tell the seat and nature of the disease, and more wonderful still, whether his patient had dined on beef or mutton, or drank for breakfast coffee from Hodeida or coffee from Mocha. To educate the senses for far less marvelous feats than those told of the Arabian leech, requires a natural talent, for if nature opposes, all else is vain. In the language attributed to Hippocrates, "It is the business of the physician to know, in the first place, things similar and things dissimilar; those connected with things most important, most easily known, and in anywise known; which are to be seen, touched, and heard; which are to be perceived in the sight, and the hearing, and the touch, by olfaction and taste, and by the understanding; which are to be known by all the means we know other things."

Possessing these requisites, the means for cultivating the intellect are various. On account of its general applicability, *reading* holds the first place. It brings to the being whose existence is measured by a brief hour, the accumulated learning of centuries; to him of feeble intellect the achievements of the greatest minds. Here we may sail on the deep sea of accumulated facts and view the silent world of passing events. Here we may select our associates in ancient or modern character. Here we may converse with the ancient seer, philosopher, poet, historian. Thus in books we are to seek patterns in learning, in refinement and taste, in reasoning, and in ethics. By common acceptation reading has come to be used as synonymous with study, so that the student is said to be reading medicine, law or theology.

To study implies the necessity of reading, and many, there-

fore, imagine that all readers are students. Each of you will appreciate the magnitude of the mistake by a little reflection. Have you not, at some time, when endeavoring to fix the attention on the description of the *os sphenoides*, or some other equally interesting and entertaining subject, been annoyed when near the bottom of the page, to find that the mind retained but a dim picture of the outlines of an osseous structure devoid of form or comeliness? The eye has followed the lines mechanically, while the mind has been reveling in scenes far away, with loved ones at home, or possibly the beautiful features, the ruby lip and lustrous eye of one left behind you, has caused the mind thus to play truant.

Need I tell any of you that time thus occupied is worse than thrown away. You can acquire no available knowledge in this manner. It is like reading Euclid's Elements, as the young man did, who had a happy genius of making everything easy to himself; he boasted of reading the whole of Euclid in a small part of one afternoon, and found it a pleasant entertainment. "But did you master all the demonstrations, and solve all the problems as you went?" inquired a gentleman. "I suppose," said the genius, "you mean the A's and B's and C's, and 1's and 2's, and the pictures of scratches and scrawls. Oh, no, I skipped all them." Alas, how many such readers there are in the world!

We are told by certain metaphysicians that impressions once made upon the mind are never effaced, and remarkable instances are cited to confirm the statement, such as the following: An individual in the excitement or delirium of fever may relate facts that in health had long since passed from the memory, or he may speak a language which he had only heard incidentally; and to strengthen belief in the stability of impressions, curious philosophical experiments are described. If upon the polished surface of a piece of metal a wafer be laid, and then breathed upon, and after the moisture has disappeared, the wafer being thrown off, though the most critical inspection does not reveal the slightest trace of any form,

breathe upon it again and a spectral figure of the wafer comes distinctly into view. And this may be repeated again and again, even after the lapse of many months. If a piece of paper on which a key or other object has been lying, be carried into the sunshine and then be instantaneously viewed in the dark, the key having been removed, a fading spectre of the key will be seen, and the figure may be made to reappear afterwards by laying the paper on the surface of a heated metal plate. It is assumed that every shadow that falls upon a wall on any of our crowded thoroughfares, is indelible, and requires only the application of some unknown process to render it cognisable by the sense of vision. Let this be true, and further, concede that these experiments are applicable to mental impressions, still, that student errs greatly who relies on knowledge held by so feeble a tenure as to be developed only in the delirium of fever, or with learning that may be rendered available only under peculiar circumstances. He should possess knowledge that is completely under the control of the will, that may be commanded under every emergency, else he may call for it in the hour of need, as he would

"Call spirits from the vasty deep,"

but it will not come.

There are those who would tell you that when the mind wanders from the subject, to defer every attempt to study for the time, and divert yourselves in any harmless amusement. I advise quite the contrary, when you fail to comprehend the full meaning of any page or paragraph, be it from any cause, commence and read it again, and repeat this if necessary, till you master it. I know the practice is hard and exceedingly annoying, but it can be done. And in this way alone can you subject the faculties of the mind and really cultivate the intellect.

It is my duty, in passing, to admonish you that it is not a matter of indifference what books you read. All books are not equally valuable, and it is seldom at the present day that we can justly estimate the value of a book, as they did when

Rome was in the zenith of her glory, at twice and even three times its weight in gold. And more than one reason might be cited to explain the depreciation in this kind of stock. The following curious statistics, taken from a book published in 1822, explains the want of value in a large proportion of books. "There are 1,000 books published per annum in G. B., on 600 of which there is a commercial loss, on 200 no gain, on 100 a trifling gain, and only on 100 any considerable profit. 750 are forgotten within the year, another 100 in two years, and another 100 in three years, not more than 50 survive seven years, and scarcely 20 are thought of after twenty years. Of the 50,000 books published in the 17th century, not 50 are now in estimation, and of the 80,000 published in the 18th century not more than 300 are considered worth reprinting, and not more than 500 are sought after in 1822. Since the first writings, 1400, B. C., *i. e.*, in thirty-two centuries, only about 500 works of all nations have sustained themselves against the devouring influence of time." I regret to be compelled to say that while the multiplication of books during the last forty years has increased, *pari passu*, with the advance of the Arts and Sciences, the ratio of valuable original books is not greater than in early times. Then how worse than useless to consume your time over a book, the very existence of which will have passed from the memory of men in a decade.

You should select the best book upon the subject you are investigating, and make yourselves perfectly familiar with it. Then you may read as many other works upon the same subject as you have time or inclination to. But you cannot rely upon your own judgment in selecting the first, you must then be guided by others in whose intelligence and judgment you can confide. You will appreciate the importance of this judicious selection of books more and more as you become conversant with the sciences, for you will be surprised to find how few books contain the sum of human knowledge, in any department of learning. I may then commend to you the advice given by the younger Pliny, "To read much but not to read many books."

You will not, I am sure, infer from anything that I have said, that the rapidity with which you pass through a book is any measure of your advancement in knowledge; for though you might finish a volume in a day, you would most likely come to the same conclusion reached by a medical student whom I knew some years since, who relinquished the study of medicine, "because he could read only a hundred pages a day." Though by no means an easy task, the habit of reading thoughtfully and with reflection, is as essential as reading the best works. As well might we expect the body to gain strength by constantly eating, without the power of assimilation, as the mind to be improved without thought; the injunction "to read, mark, learn, and inwardly digest," is peculiarly applicable to the medical student.

Lectures have long been one of the main appliances in teaching, first, as a necessity, when the scarcity of books made it difficult to obtain them, and now, when books abound, the lecture is found to be the most efficient means of instruction. The hour for the lecture commands attendance; the presence of the living teacher, his voice and occasional question ensure attention; the illustrations by diagrams, drawings, models and preparations, the experiments in chemistry, the demonstrations in anatomy, and the vivisections in physiology, as practiced in this college, addressed to the eye, make a lasting impression, so that none can go away without some addition to their stock of learning. The active attention is not less important in the lecture-room than in reading, for the page may be re-read if not comprehended at first, but by inattention, only for a moment, an important fact or principle may be enunciated, and escape the dull ear beyond recovery. Every teacher may with propriety address his class in the language of the Roman patriot, "Hear me for my cause, and be silent that you may hear. Censure me in your wisdom, and awake your senses that you may the better judge." Lectures, demonstrations, and experiments, however, will not supercede entirely the necessity of reading during the term. For it may happen that some topic may not be fully

elaborated in the lecture; or if so, it would not be surprising if, in a large class, an idea should be misapprehended, or not entirely comprehended, by some one. Then when you review the labors of the day, as you should do each night, in case of doubt upon any point, you should immediately turn to your text-book to supply the deficiency. I would not ask you to read the entire subject of all the lectures as they are given each day, but read to correct mistakes and refresh the memory when necessary.

Should the student take notes in the lecture-room? From considerable observation, I am certain that much of the labor devoted to taking notes of lectures is unprofitable; and this is most likely to be the case with students attending their first course. From their want of familiarity with the subject, they cannot readily discriminate between the non essential and the important, but in subsequent courses they should be prepared to appreciate and note down the facts, principles and conclusions announced by the teacher, and this may be of real service. Then during the first course, I believe the student will profit most by listening attentively to the lectures, and in the evening he may take notes of the lectures in the order in which they were given during the day. This course will exercise the memory, and fix instruction in the mind. This exercise of the memory will surprise most of you in its results, it is wonderful how soon you will acquire the ability to remember not only the ideas but also much of the language of the lecture. It is true you may not at first vie with the Emperor Claudius, who retained in memory all of Homer, Sallust, Demosthenes, Avicen, and Aristotle's Metaphysics. It is said of Tully and Seneca, that they never heard anything material, but it was imprinted on their memory. You need not fear the regret said to have been expressed by Themistocles, in the following language, "I had rather be taught the art of forgetfulness, for I remember those things I would not, and I can not forget those things I would."

Students who commence their medical studies by a course

of lectures are many times in doubt whether they should attend the entire course or devote special attention to particular branches. For two reasons I think they should attend all the lectures: First, as a rule, those who attempt most accomplish most, and the student who listens to every lecture will, at the conclusion of the course, have a better knowledge of medical science than he who limits himself to a partial course; and second, all recognized Medical Colleges require as a condition for graduation that the candidate shall have attended two full courses of lectures. Many unforeseen circumstances may interfere to prevent the student from attending two subsequent courses, when the partial course might be filled up, and thus he may be disappointed in obtaining the degree when he greatly desires it. And even should nothing prevent the student from attending three courses of lectures, which is by all means desirable when practicable, the course we advise has these additional advantages: By attending three complete courses, a better knowledge of medical science would be almost necessarily acquired than by attending three partial courses, while the expense of tuition would not be increased, for, after attending two complete terms, his right to attend subsequently, free, becomes perpetual.

By the means enumerated, you may become learned in the science of medicine; you may be enabled to talk fluently, and write graphically of disease; and still fall short of being skillful physicians. Something more is necessary to render your knowledge available in the sick room. You must acquire a certain practical tact, to remove the embarrassments that would otherwise meet you at every turn.

The foundation of medical experience is observation of disease, and the requisites of successful observation are minuteness and accuracy. Thus you see the importance of clinical study. In books disease is delineated in bold outlines, which may lead you to believe that all doubt and uncertainty are swept away; but clinical experience will very soon undeceive you, for in practice you will seldom find these

distinctive characteristics strongly pronounced; the idiosyncrasis of the constitution, the complications of distant organs, through what is called sympathy, so mask the morbid state of the suffering organ, that you will feel no little doubt in determining which set of symptoms are accidental, which are diagnostic. From this difficulty you will be relieved by your professor of clinical medicine, who will make the examination of patients in your presence, and eliminate the false from the true, the important from the accidental symptoms, and thus enable you to see at a glance the seat and nature of the disease.

The first step to successful clinical study is to select a representative case. In this, students not unfrequently make a mistake by selecting some remarkable and unusual case for observation and study, and one it may be, too, not amenable to treatment. Whereas much more profit would be gained by devoting the same time to some case of frequent occurrence. Then note carefully every particular relating to it. Let the symptoms represent the letters; combine these to form words; then arrange these words into a sentence, which shall read to your mind the history, the nature and the treatment of the disease. It is necessary to be thus minute and accurate in every case. It should become habitual. And you will at length acquire a tact of reading the case at a glance, as you would the printed page, without fixing the attention especially on the elements—the letters—of which it is made up.

No attainment is more important to the physician than well cultivated habits of observation. To observe is to examine; it implies intention. We may notice an object because it is cast before us; but observe it only when we make it a source of our reasoning. We may, therefore, observe by means of the senses, or by the process of induction. The physician must observe minutely, in order to distinguish accurately. He may know the character of the disease, but to distinguish its degree of progress often requires great discriminating powers and careful observation. The careful observer does

not merely notice all the minute points of a case, but reflects upon them, associates them together. He gleans from every circumstance the source of his reasoning. He considers the history of the case—the expressions of the countenance—all the surroundings. Thus as the boy reads the page at a glance, so the educated physician is finally enabled to read the true condition of his patient. One case elaborated thus will be worth more to you than many cases examined cursorily and without order.

Your improvement will depend not more upon the number of cases at your disposal than upon the use you make of them. What you undertake in this department perform as you would anything else, to the best of your ability, minutely, accurately.

In your first attempts thus to study disease, you will, as others have before you, meet with difficulties. Should these embarrassments discourage you, and lead you to conclude that the practice of medicine is at best a conjectural art, I ask you to remember that in the early dawn of society the indications for cure were drawn from sources as insubstantial "as the baseless fabric of a vision," from dreams, from incantations, charms, and the inexplicable utterances of oracles. Now, practice is based on a knowledge of pathology that draws its interpretations from the science of physiology. How minute, how precise, how connected and definite now. How loose, indefinite, uncertain, how vague and unconnected then.

I anticipate the time when the explanations of physiology shall leave no point in the complex functions of our organisms unexplained; and on this perfected knowledge, the practice of medicine should vie in accuracy with the mathematical sciences of this day. In these achievements is my hope of the utter extinction of quackery from the pale of society. Let us then be thankful for the blessings of the present, and hopeful in the bright promise of the future.

The means which we place before you, during the course,

will be ample to aid you in becoming scientific and skillful physicians. If proof of this were needed, we have but to refer to the long list of those who have preceded you from this institution. And it is with no ordinary feelings of gratification that I am enabled in this public manner to refer to the character and success of more than seven hundred alumni of this College, who have attained the most responsible positions, in both civil and military practice, and have filled them with credit to themselves and honor to their *alma mater*. *Probatum est*, thus do we prove that the facilities and the arrangement of the course which we commend are all that is essential to conduct the student to eminence in the profession. We do not claim to have exclusive control of any great discovery in the art of teaching which promises to relieve the pupil from the personal labor of studious application, or to lead him by new and enchanting paths to the object of his aspirations, for such promises ever prove fallacious; such paths, though flowery, too often prove devious, and lead to disappointment.

In selecting the profession of medicine as the vocation for your life's labor, the question of importance which should be well considered is—Have you chosen well? If to live for yourselves, to amass a fortune, to enjoy luxurious ease, and as you appear in public to be designated by the splendor of your equipage, be your aim and ambition—No. For no other calling would demand so many self-denials; in none would time for pleasure or amusement be less at your disposal; in none would your physical energies be more severely taxed; in none would your moral sensibilities be so painfully exercised. But, if to live for others' good; to relieve the distressed; to administer consolation to the anguish-stricken heart; to answer calls of charity and mercy; if to command the confidence and esteem of the wise and good, give you satisfaction—Yes. For no other business of life offers more frequent opportunities for blessing the suffering ones of our race; in none would you be led more directly to imitate the example of the Great Master who went about doing good.

The greatest achievements of the physician are not always those that are most loudly proclaimed to the public ear. Nor does the conscientious physician derive his highest gratification from listening to the tones of popular applause. His vocation seldom leads him into the noisy strife and busy excitements of life; but his mission is to the chamber of suffering. Look out upon the earth—the landscape is everywhere beautiful with flowers and fruit and grain; but over every mountain and valley, over city and plain and cottage, there rests a cloud—it is the shadow of the wings of Azrael and of his ten thousand inexorable ministers of death, and they are busy at their silent, ceaseless work. Do you not hear the wail of the mourners, breaking like sea-waves along the shore? There is sickness and pain and death everywhere across this beautiful earth. Wherever man flies, there these unrelenting foes follow. In all latitudes and climates, abroad and at home, the weary, panting fugitive still turns and struggles in vain to elude their pursuit, or to shake off their hateful companionship, and in his extremity he will appeal to you, who are to become the conservators of health and life, to ward off the blow of these destroyers, to turn back the march of these mortal foes—and your aid will be invoked to restore to the embrace of despairing friends one just vibrating between life and death. These are the physicians labors; such are his triumphs; and they afford him far more satisfaction a sweeter pleasure, than all the hollow acclamations of the populace.

I should wrong you, however, and misrepresent the profession, did I leave upon your minds the impression that these are the only rewards you are to expect in return for weary years spent in study in your lonely chamber—in the wards of the hospital, and in the mephitic atmosphere of the charnel-house; or for the labors, the sacrifices of personal comfort, and the anxieties inherent in the medical art. While I concede that ours is emphatically a benevolent calling, and that we should lend a willing ear to the call of pity and a helping

hand to those in distress, yet the maxim drawn from holy writ, that "the laborer is worthy of his reward," has a binding force on the recipients of our sympathy and skill. I have just intimated that the medical profession does not open the way to princely fortune; nevertheless, I know of no occupation in life in which a competence may be more surely acquired than by the skillful physician; and never was there a time when the medical student was stimulated by so many incitements to perfect himself in the profession. In civil life the demand for competent physicians is as pressing as it has ever been. In the army and navy the need of educated surgeons is so great that promotions to the highest rank are sometimes reached before the second year. But please remember that the guarantees to success are scientific attainments and skill.

The labor before you is real. I invite you to no holiday pastime. You should see before you, and prepare for the earnest work of a useful life. A proper preparation requires not only the highest scientific attainments, but also the highest principles of honor. The noble men who have contributed most to elevate and advance our chosen profession have been the ornaments of society, as eminent for their virtues as for their scientific attainments and skill. Emulate their virtues, aspire to their attainments.

But I will detain you no longer. In the allotment of labor among your instructors it becomes my pleasant duty to present you our cordial greeting. With emotions, therefore, of pleasure and good will do I welcome you to these halls consecrated to the cultivation of medical science. For myself, Gentlemen, and in behalf of my colleagues, I would assure you that these are no formal, meaningless words. The intimate relations which are to exist between you, as members of the class, and the Faculty, as your instructors, shall bind us in sympathy and interest strong as fraternal ties. We meet those who have favored us before as old friends. Those who occupy these seats for the first time we welcome to the work which, although arduous, is not

one of drudgery. I almost envy the pleasure in young and ardent minds of rising step by step in knowledge, and delighting in the wonders and beauties of the enlarging view, and "beholding the bright countenance of truth in the quiet and still air of delightful studies."

In the work which you have undertaken it needs no words of mine to stimulate you. Let the mission of our profession lead you on to improve the facilities offered you. Let the awfully momentous events now passing in the phenomena of the world be your monitors. You cannot, if you would, be indifferent spectators. While the crimson cloud of war rests over our beloved country—as if the angel was now emptying the vials of wrath—there is an imperative demand for your best efforts in her behalf; and, oh! let us devoutly hope, that the light now breaking in the distant horizon may not disappoint our earnest expectations—that the time is near when the curtain will be rolled up, though red with the best blood of your fathers and brothers, and that the dove with the olive branch may again spread her wings over a united, happy and prosperous people.

REPORT ON ORTHOPEDIC SURGERY,

MADE AT THE ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, CONVENED IN CHICAGO, MAY 3D, 1864.

By DAVID PRINCE, M. D., Jacksonville, Ill.

(*Continued from last month.*)

As the various species of congenital Talipes are similar to the corresponding deformities developed subsequently to birth from derangements of innervation, it is fair to infer that, in most cases, a similar derangement of innervation has existed during fœtal life. This conjecture is rendered more probable by dissection, which shows that the bones of the tarsus have their proper forms until they are afterward slight-

ly changed in figure by the great pressure to which they are subjected in walking.

This change is much less than a superficial glance would lead one to suppose, there being nowhere a complete dislocation, but only a sliding a little further than the normal length of the ligaments permits.

Figure 4.

The following figure, (Fig. 4,) taken from "Little on the Nature and Treatment of the Deformities of the Human Frame," sufficiently illustrates this point.

The relative importance of paralysis and spasm in the production of this and other deformities will be differently appreciated by different minds standing in opposite positions. The quotations from Bauer,(*), representing the older pathology, and from Barwell, (†), representing the newer, illustrate this point:

Dr. Bauer thinks (p. 12) that contraction of the sural muscles (the muscles ending in the tendo achilles) generally the chief cause of the extension of the foot in Talipes equinus. He makes no account of the doubling up of the foot at the medio tarsel articulation so carefully explained by Little and Barwell, and equally with Barwell omits to mention the calcaneo-metatarsal and calcaneo-phalangial muscles as elements in the etiology.

Referring the disease to the shortened muscles, he says: "As a general thing, the contracted muscles have lost all susceptibility of being acted upon by the galvanic current,

(*). Lecture on Orthopedic Surgery, by Louis Bauer, M. D. Lindsay & Blackiston: Philadelphia, 1864.

(†). The Treatment of Club-Foot without the Division of Tendons, by Mr. Richard Barwell, &c. London: 1863.

yet their powerful extension gives rise to unbearable pain. This fact seems to demonstrate that the muscular structure is in a state of contraction to the extent of its capacity, or the substituted tissue is devoid of all contractile" (expansive) "power. It is certain that innervation has not been entirely lost while pain can be provoked by extension."

In the conditions referred to in this paragraph, the occurrence of pain may perhaps be better explained by bearing in mind that the muscles concerned have for the time acquired the conditions of ligaments.

We know well enough that the ligaments are susceptible of acute pain when over stretched. When a muscle, therefore, which has lost its function from loss, change or paralysis of its muscular substance, is pulled further than its investments of white fibrous tissue will permit, without injury to its habitual physical condition, it is in close analogy with an over stretched ligament, and it should be the seat of pain, the same as if it had originally been a ligament.

The following additional quotation is a further illustration of the spasmodic pathology:

"After the division of the tendons many months may elapse before the galvanic current makes any impression, and in some instances the contractility of the muscles is gone forever."

If the division of tendons is all that is done, the shortening ought to go on still more. It is probably the subsequent movements, effected in the course of the treatment, that restore the susceptibility to the galvanic current.

Dr. Bauer finds an advocate for the doctrine of tonic spasm as the cause of Talipes equinus in Dr. Joseph Pancoast,* of

* Dr. Joseph Pancoast, of Philadelphia, claims that the elevation of the heel in Talipes equinus is owing to the contraction of the soleus while the gastrocnemius remains flaccid, and he accordingly divides the soleus muscle by passing a knife in under the gastrocnemius, instead of the usual easy method of dividing the tendo Achillis.

It is found in any confirmed case of Talipes equinus or T. equino varus, that the soleus is rigid and incapable of extension, while the gastrocnemius is yielding. Dr Pancoast is therefore of opinion that the soleus is the author of the mischief.

The fact has another explanation. When a muscle contracts with such

Philadelphia, who thinks that of the three muscles uniting to make the tendo achillis, only the soleus is inordinately contracted, and accordingly he only divides the soleus in the treatment. This is done by passing the bistoury under the gastrocneimus and cutting the soleus just as it becomes tendinous and unites with the gastrocneimus; the edge of the knife being carried towards the bones for this purpose.

It would be wrong, however, to leave the reader with the impression that Dr. Bauer considers spasm the uniform cause of Talipes, and the following quotation from page 19 of his book will do him justice on this subject:

"After mature deliberation, we have come to the conclusion, that the cause in congental as well as acquired club-foot is pre-eminently defective innervation, and there is truly no reason why derangements in the nervous system should not take place in the fœtus as well as in the new-born child. In club-foot, the tibial nerve is the bearer of the difficulty, as must be inferred from the experiments of Bonnet." * *

"All forms of varus are caused by either muscular contraction or motor paralysis, and the individual bones of the foot yield only so much in their respective positions as they are forced to do, by the abnormal muscular traction and the

power that its antagonists cannot extend it, the more powerful muscle soon beeomes inextensible and it settles into the function of a ligament, holding firmly the points to which it is attached; the muscular tissue gradually becoming atrophied, and while the size of the muscle diminishes, its hardness increases.

This is the state of the soleus in extreme Talipes equinus. The upper end is attached to the tibia and fibula, and when the calcaneum is elevated as far as its ligaments and bony connexions will permit, the soleus can contract no farther, and if not lengthened by an opposing power it at length becomes hard and yielding. This result is prevented in the gastrocneimus by its attachment to the femur whose movements keep this muscle active and extensible. After the soleus has become rigid from *immobility*, the gastroc nemius continues to have *mobility*, and therefore it preserves its extensibility. It is not that it draws less, but that it never acquires a stationary contraction, and thefore never comes into an unyielding condition.

Disproportionate weakness of the flexors of the foot with anchylosis of the knee joint would probably result in equal extreme contraction and consequent rigidity of gastrocnemius and soleus alike.

This explanation entirely destroys the value of Dr. Pancoast's method of dividing the soleus, instead of dividing the tendo Achillis, in permanent elevations of the heel.

superincumbent weight of the body. Being held for sometime and acted upon in the preternatural position, they gradually mould themselves accordingly, and become consequently malformed."

In the opposite pathological view, it is claimed by that careful observer, Mr. Richard Barwell, that it is not usually spasm of the stronger, but paralysis of the weaker muscles, which lies at the foundation of deformity, and in support of this view he refers to the common experience that in Talipes the temperature is generally low, while in spasm it is generally high. (*Loco citate* page 19.) "Infants, as is well known, are subject to convulsions, and it is averred that sometimes one or more muscles which have during the attack drawn the limb into malposture, do not recover from the contraction, but continue to keep the limb distorted. * * The state should be one of persistent, unvarying spasm, powerful enough to overcome the antagonistic healthy muscles, and permanent enough to produce lasting change of form. Such condition does not only never come under our notice, but it is, I believe, pathologically impossible. There are no doubt a few cases of peculiar paralysis of the voluntary power over the muscles, while the excito-motory function continues; and in the spasm of the whole set, the strongest organ will of course predominate. Voluntary power is as much used to control as to excite. The paralysis of this power is as much evidenced by violent and uncontrolable spasm as by incapability of subordinate movement. In my experience, such state seldom continues long, unless there be cerebral disease or deficiency, but terminates within a limited period in death or complete recovery, or in simple paralysis in one set and perfect restoration of power in another set of muscles." * * * "Laryngismus stridulus, or false croup, is attributed by some to spasm of certain muscles, while by other authorities, and I believe with more reason, it is considered as paralysis of a different pair. Let it be observed, also, that the squint which may come and go with other symptoms of brain mischief, or may

be a permanent affliction, is certainly to be more rationally regarded as want of action in the outer rectus, which appropriates the whole of one nerve, (the sixth), than as spasm of the inner rectus, whose nerve supplies four other muscles of the eye and appendages. Certain also it is, that some congenital deficiencies of the nervous system, whereof club-foot and club-hand are pretty constant accompaniments, as acephalosis, etc., etc., may, indeed must, produce paralysis; but there is no evident connection between such deformity and spasm." p. 23.

"Altogether, there can be no doubt that paralysis is very much more frequently the cause of club-foot than the opposite condition. * * * The morbid contraction of a muscle, or set of muscles, is hardly ever violent enough or persistent enough to cause a permanent alteration in the shape of the foot while the opposers remain active."

"The muscles, while healthy, are always kept at a degree of tension by tonic contraction, but when any one organ or set of organs has lost its power, the opposers draw the limb in the opposite direction by virtue of that constant and elastic sort of force. For a long time after the commencement of the paralysis there is nothing whatever wrong with the active muscles, but after they have been allowed to become thus short for a certain period they begin to adapt themselves to the shortened condition, and still further contracting as they meet with no resistance, determine at last changes of form in other structures, and so produce permanent deformity."

The clearness with which the points are here made justifies the length of the quotation.

TREATMENT.

It is believed that a careful consideration of the nature and pathology of the different varieties of Talipes, as explained in the preceding pages, will afford the foundation for clear ideas of the indications of treatment, whether preventive or curative. The plans and expedients for meeting these indications are now the earnest study of those interested in this

branch of surgery. No words of mine can be more appropriate than those of Barwell (p. 25):

"It is not to be imagined that when the limb has yielded in the direction of the healthy muscles the sickly ones can recover sufficiently quick or entirely to restore, by their unassisted might, the proper balance of the foot. The weakened muscles want assistance, and the way to render this, in the manner which shall best aid them to overcome the deformity, and to recover from the paralyzed or enfeebled condition, is the problem which surgeons should endeavor to solve."

It is one of the points showing the impossibility of practically and completely separating medicine from surgery, and the different branches of surgery from each other, that in those cases of paralysis, previous to the occurrence of obvious deformity, the disease would be said to be in the department of medicine, though mechanical or chirurgical means are necessary to prevent the occurrence of deformity, and afterwards, when the deformity places the disease fairly in the department of surgery, the best period for surgical treatment has been allowed to pass by, because the case was in the department of medicine.

The physician must study surgery, and the surgeon must study medicine.

Whoever has examined a case of club-foot by taking hold of it with his hands, may have thought, that if he only had a machine that would take hold of the foot as firmly and yet as tenderly as does the hand, without relinquishing its grasp, and yet pulling yieldingly but persistently, and without tiring out, he could cure any case. The defect of every metallic apparatus is, that while it grasps the foot firmly enough, it pulls unyieldingly, without that distribution of force among all the distorted joints which is effected by the hand. They are most of them intended to act chiefly upon the tibio tarsal joint, while the most careless inspection of any species of Talipes, except one of simple Talipes equinus, will show that the distortion of this joint is a minor element in the case.

That an adequate substitute for the hand is a desideratum not yet furnished to the public, is sufficiently proved by the words of Dr. Bauer (p. 23). "There is no mechanical apparatus, however ingeniously constructed, which could be substituted for the hand in the treatment of Talipes, with any approximate degree of efficiency. In fact, if we could, without interruption, employ the hand as a mechanical agent, we should relieve most obstinate forms of Talipes, which *too frequently* withstand our mechanical appliances." This is an estimate of the importance of some substitute for the hand, with an expression of hopelessness as to its attainment.

On the other hand, Dr. Gross, in his great work on Surgery, vol. II, p. 1011, is well enough satisfied with our present attainments in the art, neither desiring nor expecting any improvements. He says, "It is, perhaps, not going too far to affirm that these topics (club-foot, etc.,) are as well understood now as they ever will be."

Dr. Bauer again places this estimate upon our present attainments (p. 28). "They (mechanical appliances) possess no curative virtues, but retain the foot in the position in which tenotomy and the acting hand left it."

It is believed that in the course of these pages a process will be explained which is a pretty adequate substitute for the hand.

The earlier experimenters in this art seem to have relied chiefly upon wood and iron as substitutes for the hand, but so generally did they occasion ulcerations of the prominent parts that the art made no important progress until the introduction of subcutaneous section of the tendons by Stromeyer, in 1831. In a large proportion of the cases of Talipes, including all the species *equinus*, the division of the tendon Achilles permits an immediate improvement in the position of the foot, and facilitates the further reduction of the distortion of the joints of the tarsus. This tendon had been cut at various times before Stromeyer, by making an open wound, but this procedure could never be generally adopted. Dr. H. G. Davis, in

his report on Deformities, in the Transactions of the National Medical Association for 1863, quotes Isaac Minçius as having divided it in 1685; Thellenius, in 1784; Sartorius, in 1806; Michaelis, in 1809; Delpech, in 1816; but none of these men could think of so simple an expedient as passing in a small knife at a point distant from the tendon, and so dividing it that the incision through the skin should heal without suppuration. It is commonly recommended, to puncture the skin, with a sharp pointed bistoury, upon the inner or tibial side of the tendon, opposite the internal malleolus, or higher, if the heel is very much elevated, and having withdrawn this to pass a probe pointed bistoury between the tendon and the tibia, and while the tendon is made very tense by the hand of an assistant holding the foot, to cut the tendon by pressing the fingers upon it, thus crowding it upon the knife. If any shreds remain undivided the fact is known by the failure of the heel to come down, and the bistoury is again partially withdrawn and passed under them, when they are divided by the same process by which the main portion of the tendon was cut. The reason for passing the knife on the tibial side of the tendon is the less danger of wounding, by the point of the knife, the posterior tibial artery, which lies upon the inner side, and the same reason exists for cutting toward the skin instead of passing the knife between the tendon and the skin and cutting toward the bone. A small piece of plaster laid over the minute incision is all the dressing that is necessary.

It is common to describe instruments peculiarly constructed for this purpose, but they are unnecessary. Many of the instruments made for tenotomy are too delicate.

Apparatus for extension is immediately applied by some, but in order to secure a union of the divided ends of the tendons by organizing exudations it may be more safe to postpone this for a few days, and then to make the extension very gradually. It is not known that the tendo Achilles, divided subcutaneously in early life in the human subject, has ever failed to unite, but in an experiment which I made some years ago,

upon a dog, the divided tendo Achilles united only by shreds of its investing sheath, which indeed may never have been divided.

It is suspected that the uniform success of division of the tendo Achilles, as introduced by Stromeyer, gave an unmerited estimate of the importance and utility of the division of tendons and muscles in general. A reaction in this estimate has led many to discontinue the practice of dividing tendons, except in rare cases of remarkable obstinacy, while others seem still to believe in tenotomy with undiminished zeal.

Among the former is Mr. Richard Barwell, of London, who says in the preface to his little book, "I studie these maladies from the orthopedic point of view, and while tenotomy was almost a novelty in England, was so charmed with the easy change of form, which after such an operation could be produced in most distortions, that I became an almost enthusiastic admirer of the procedure. After, however, following up carefully a large number of these cases, I was pained to find in how many of them the deformity more or less returned, in how many a different, an opposite distortion supervened; while power over the limb was actually injured or destroyed in so large a majority of instances that its retention appeared absolutely exceptional."

This language sounds very much like that of one temporarily thrown out of balance by an extreme reaction in opinion, instead of stopping at the safe middle point.

The latest published opinions on the other side, are those of Dr. Bauer, (p. 34 of the little book already referred to,) who says, "The active forms of valgus necessitate the division of the contracted peroneus muscles, or of the whole group of the abductors as the case may be. This is at least indispensable in inflammation of the tibio tarsal articulation. *

* * It is difficult to steady the articulation with mechanical appliances in paralysis of the entire motor apparatus of the foot, but it is completely impossible to do so when the malposition of the latter is maintained by retraction of the pero-

nei muscles. We at least, have never succeeded by any of the devised mechanical auxiliaries. Meanwhile the deformity increases and gradually compromises the bones of the tarsus. Between the two evils we have to choose, and we think that division of the contracted tendons is the lesser."

Now it is the division of these tendons which, like the peronei, run in long ligamentous grooves along the tarsus, which is most objected to. It is claimed that the function of these muscles is often permanently suspended by division, either by not uniting, or by adhering to their sheaths, so as no longer to be able to act upon the bones into which they are normally inserted.

Mr. Wm. Adams, of London, has been investigating this subject during the last few years, and has dissected twelve feet in which tenotomy had been performed. The results of these investigations have been published under the title, "On the Reparative Process in Human Tendons." Mr. Barwell has reduced these results to tabular form, which is here quoted.

Table from "Boswell on Club-Foot," Elit. 1863—*Analyzed from "Adams on the Reparative Process in Human Tendons."*

No. Cases.		Tendons Divided.	Results Observed.	Time lived after operation.
I.		Tendon Achilles, Tibialis Anticus.	Non-union of Tibialis Anticus,	4 days.
II.		Tendon Achilles. Tibialis Anticus. Tibialis Posticus Flexor long. dig.	Non-union of Tibialis Anticus. Non-union of Flexor long. digit.	11 days.
III.	left.	Tendon Achilles, Tibialis Posticus	Tibialis Posticus adherent to the bone.....	23 days.
	right.	Tendon Achilles, Tibialis Posticus Tibialis Anticus.	Tibialis Posticus was supposed to be but was not, divided.	30 days.
IV.		Tibialis Posticus,	Union to all surrounding parts.	
		Flexor long. dig.	Non-union, held together by shreds of sheath to which other parts also adhered.....	18 days.
V.		Tendon Achilles. Tibialis Anticus, Tibialis Posticus Flexor long. dig.	Tibialis Posticus and Flexor longus digitorum adhered together and to the bone	6 weeks.
VI.		Tendon Achilles. Tibialis Anticus. Tibialis Posticus Flexor long. dig.	Tibialis Anticus and Flexor long, dig. adhered together and to the bone; ends of tibialis ant. hung together by shreds of sheath.	6 weeks.
In the 5 next cases in Mr. Adams' work the Tendon Achilles only was divided.				
XII.		Tendon Achilles, Tibialis Posticus Flexor long. dig.	Non union of Tibialis Anticus. Neither retraction nor extension of the Flexor longus digit.	Several yrs

Analysis of the Preceding Table.

Division of the Tendo Achilles, 12 cases; united in 12.

Division of the Tibialis Anticus, 4 cases; united in 1; not united in 3; adhered to surrounding parts, equally destroying the function of the muscle, in 1.

Division of the Tibialis Posticus, 7 cases; not divided in 1; united in 3; not united in 3; adherent to bone or surrounding parts, suspending the function of the muscle, in 3; that is, in all the cases of non-union.

Division of the Flexor Longus Digitorum, 5 cases; united in 1; not united in 4; adherent to surrounding parts, (among the cases classed non-union,) 2.

From this analysis we may well hesitate before dividing any tendon about the foot, except the Tendo Achilles. If the result in these cases is of any value, the division of these tendons should only be practiced in instances in which, from permanent loss or paralysis of the opposing muscles, a permanent loss of muscular contraction is desirable in the muscles whose tendons are to be divided.

The following interesting observations and experiments by Dr. L. T. Hewins, of Loda, Iroquois co., Ill., show the influence of young age upon the activity of cicatrix formation to connect the divided ends of tendons, or to pull them together.

Upon a dog four years old, he failed. Upon dogs ten days, and three months old, he succeeded, after removing portions of tendons. He also succeeded perfectly upon a rabbit. He observed the reproduction of tendon, or substitute for it, in the extensor digitorum manus, in one man 35 years old, three-fourths of an inch having sloughed off, and in another man, aged 38, half an inch having been lost by sloughing.

These latter cases were successes under difficulties, the wounds being open and granulating, and presenting the conditions and favoring agglutination of the tendons to the bones and other surrounding parts. The influence of motion in elongating adhesions and reducing shapeless masses of newly organized material to the shape and function of tendon, wheth-

er permanent or temporary, by its gradual shortening and disappearance, is well illustrated.

LODA, ILLS., Sept. 12, 1862.

Divided the tendon of a healthy dog, about four years old, corresponding to the Tendo Achillis in man. Removed a section of the tendon so as to be sure if I could get reproduction of tendon in an animal of that age. Dressed the limb with splints and rollers to prevent motion.

Sept. 20th.—Removed dressing from the limb. External wound healing kindly; no evidence of growth of tendon.

Oct. 2d.—Examined limb; no evidence of reproduction; fascia both superficial and deep-seated, are quite adherent to the divided ends of the tendon.

Oct. 15th.—Removed dressing from limb; no elongation of tendon; fascia and tendon uniting; fascia more firm than at former examination, and evidently thickening.

Dec. 1st.—Examined the divided tendon; find no evidence of growth in length of tendon; fascia have united with divided ends of the tendon, to form a common link between those parts. The dog walks with a hobbling gait.

Sept. 12th, 1863.—One year after the division of the tendon in the above case, there is no evidence of reproduction of tendon; the divided ends may be felt through the integument and the fascia is very firm. Dog has a hobbling gait and is permanently lame.

Sept. 13th.—Divided the tendon in a dog about ten days old, corresponding to the one divided in the former case, and a portion of the tendon removed. Dressed the limb to keep at rest; dog seemed entirely healthy.

Sept. 20th.—Dressed the limb. There is evident prolongation of tendon.

Oct. 2d.—Dressed the leg. Tendon manifestly extending, so as nearly to unite.

Oct. 12th.—Tendon not yet united, kept on dressing.

Oct. 23d.—Tendon not completely united, but the divided ends approaching each other.

Nov. 15th.—Examined the leg; found the tendon entirely united, having a good degree of firmess; dog walks without halting.

Dec. 25th.—Divided tendon seems as strong as undivided one of the other leg; dog walks without limping.

Feb. 2d, 1864.—Divided tendon of a dog three months old. Dressed, after removing a portion of the tendon, so as to keep from motion.

Feb. 10th.—Dressed the leg; wound in integument healing kindly; evident formation of new tendon.

Feb. 20th.—Dressed the leg; tendon still growing in length.

March 2d.—Dressed the leg; found divided ends of tendon approaching each other.

April 1st.—Tendon fully formed and pretty firmly united; wound has healed kindly. Dog walks well.

March 3d.—Divided the tendon in the leg of a rabbit, and dressed to keep motionless.

March 10th.—Dressed the wound; looks well, tendonous organization evidently going on well.

March 20th.—Tendon elongated; union hopeful.

March 30th.—Tendon fully formed, but soft.

April 15th.—Tendon fully formed and more firm. Animal walks well. This animal seemed very healthy.

Nov. 4th, 1862.—D. S., (a German by birth,) a healthy man, aged 35 years, had the extensor tendon of the middle finger on the left hand divided by a corn-knife. Wound was neglected about 14 days, by which time the tendon had ulcerated and about three-fourths of an inch had sloughed out, when he applied to me for treatment. Dressed the hand and kept the finger extended and at rest; attempted to subdue inflammation in the hand, which was at the time extensive, as soon as possible, and to arrest ulceration of tendon and its necessary distinction. After twelve weeks new tendon had been produced to supply the waste made by previous ulceration, and the finger restored to its normal action.

April 15th, 1864.—Mr. J. D., a man aged 38 years, had his

index finger on left hand seriously injured by contused wound from a hand-car. Ten days afterward he applied to me for treatment. I found about half an inch of the extensor tendon of the finger sloughed off; have dressed and watched the finger carefully to this date, June 2d, and by this time a new tendon has formed, but is soft. I think we shall have a good finger. L. T. H.

(*To be continued.*)

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,
Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

IRITIS.

Gentlemen :—From the number of cases of inflammation of the iris, which I have been able to bring before you during the present course, you may judge of the relative frequency of the disease. You will probably, in practice, meet one case of Iritis in every fifteen cases of diseases of the eye. If not on account of its frequency, certainly on account of the importance of the structures implicated, Iritis merits your careful study.

From whatever causes produced, the inflammatory action seems to commence in the spindle and star-shaped cells of the iris, but soon extends to the areolar tissue, the cells of the muscles and of the epithelium.

The swelling, redness, pain and sense of heat, experienced in the smallest pimple in the skin are a type of the symptoms which present themselves in iritis. The great vascularity, the extensive supply of nerves and the delicacy of structure explain the differences in the phenomena observed in iritis.

The objective symptoms of this disease are usually marked and readily detected, especially when the habit has been formed of examining the color and general aspect of the iris,

the shape and movability of the pupil in different individuals in health. One, who has not formed this habit, will very often fail in his diagnosis. An error in diagnosis leads to an error in treatment, which is possibly more liable to do harm in iritis than in most other diseases. The most common mistake seems to be in confounding the vascularity in the early stages of iritis with that of conjunctivitis. Caustic astringents, so useful in the latter disease, are very dangerous in iritis.

One of the first symptoms of iritis is a sluggishness in the movements of the pupil when exposed to sudden changes of light and shade. This inactivity of the pupil is caused by the products of inflammation, pressing upon the nerves and muscles of the iris, impeding their action. Hence the pupil is fixed.

The fact which I have already mentioned, that the pupil is contracted by sleep and by irritation of the branches which the fifth pair of nerves send to the iris, will explain why the pupil is also contracted in iritis. The inflammatory action produces irritation of the nerves; this, with sleep, contracts the pupil. Consequently, as the disease progresses, the pupil becomes more and more diminished in size.

A discoloration of the iris with irregularities upon its surface, and especially upon its pupillary edge, is quite a constant symptom. The discoloration is produced by the extravasation from the cells and vessels into the substance of the iris. The formation of lymph is especially active at the pupillary edge of the iris, tending to unite the iris with the capsule of the lens. If the pupil is suffered to remain contracted it is liable to be completely filled with lymph, which not only unites the opposite edges of the pupil with each other, but also with the lens. In this case vision is almost totally destroyed. If the pupil is kept dilated without arresting the disease, the attachment between the lens and iris may take place, although the pupil itself and the central portion of the capsule of the lens may remain perfectly transparent.

Pain and redness, although perhaps always present, are symptoms exceedingly variable in degree. The pain may be but a slight uneasiness in or about the eye, or it may be agonizing beyond description. The redness is of a peculiar pink tint in the earlier stages of the disease, and is confined to a zone of fine radiating vessels of the subjunctival membrane around the cornea. Subsequently the conjunctiva itself may become congested and œdematous, when the characteristic color of iritis may disappear.

Obscuration of vision, produced by the products of inflammation, floating in the aqueous humor, is a marked subjective symptom. This cloudiness of the aqueous humor can be readily detected in ordinary cases. It requires, however, some experience in observation to distinguish it from certain cloudy appearances in the cornea when inflamed.

Pus is sometimes formed by iritis and thrown into the anterior chamber. Less frequently, perhaps, the rupture of a minute blood-vessel of the iris causes the presence of blood in the aqueous humor.

The causes of iritis are principally mechanical injuries, whether from accident or surgical operations, a syphilitic, scrofulous or rheumatic diathesis. With these predisposing causes, sudden changes of temperature, strong light, imprudent use of the eyes may become the active cause. Measles, typhoid fever and the absorption of pus into the circulation have been in rarer instances the apparent cause of the disease.

The termination of iritis is usually as follows: If the treatment has been skillful, all the tissues of the eye may escape uninjured. Even pus and blood may be absorbed from the anterior chamber and the lymph deposited upon the edges of the pupil (iris) and capsule of the lens may disappear.

The disease may run quite a rapid course, extending to the choroid and other tissues, and soon destroy the usefulness of the eye. You should remember that very often in proportion to the extent of the adhesions between the iris and lens will be the danger of relapse and ultimate loss of vision. Re-

peated attacks of iritis, after adhesions have been formed, seem inevitably to lead to choroiditis and loss of vision.

The substance of the iris may be filled to such an extent with the the products of inflammation, and the nutrition of the muscles and nerves so impeded as to destroy the true structure of the iris in the same way, as we have already seen, that the conjunctiva may become a thin, parchment-like membrane in zeropythalmia.

The course of few diseases, we believe, is so favorably modified by treatment as that of iritis. Pneumonia, dysentery and other similar diseases may recover without treatment and the organs implicated may be as healthy as before. I believe that inflammation of the iris, uninfluenced by treatment, rarely leaves vision as perfect as before the attack.

Omitting all theories and explanations, I shall allude but to a few of the most practical and important rules in the treatment of iritis. The following, I believe, are the three points of greatest importance: to keep the pupil dilated from the commencement of the attack by the frequent instillation of a strong solution of atropine; to confine the patient in a quiet room, with suitable temperature and little light; to allay pain by the use of anodynes. By a careful attention to these three points, you will find little difficulty in relieving uncomplicated cases of iritis. I usually employ a solution of the neutral sulphate of atropine, four grains to the ounce of water. A couple drops of this should be introduced between the lids every hour, more or less frequently according to the severity of the case. As an anodyne you may use morphine, cannabis indica, or codeia. The two latter are valuable agents in cases where morphine produces unpleasant effects. The doses should be sufficiently large to subdue the pain. Hot fomentations on the forehead and temple are of some assistance in reducing pain. Veratrum viride, aconite and gelsemine, if they do not tend to cure the disease, certainly palliate the symptoms, even where there is not much general fever. The diet should be light, and mild cathartics administered as re-

quired. Suitable constitutional treatment should, of course, be adopted in cases of complication with rheumatism, syphilis or scrofula.

I have never treated a case of iritis without prescribing mercury. You are aware that old authorities consider this remedy as all-important in iritis. Within the past few years, however, several oculists, especially Dr. H. W. Williams, of Boston, have shown that iritis can be successfully treated without mercury. Although this modification in the treatment is gaining favor, I think comparatively few distinguished oculists of different countries have discarded the use of this remedy. It should only be given in such doses as scarcely to effect the gums, care being taken to adapt the quantity to the susceptibility of the patient to its influence.

I have succeeded so well in treating iritis upon the plan above described, that I have not found reason to change it, even in omitting mercury. I am, however, more and more inclined to make the trial. The paper by Dr. Williams, and other shorter articles upon the subject by different writers, in medical journals, are worthy your consideration.

In cases of extensive adhesions between the iris and lens, with tendency to relapse, the most successful treatment is the removal of a portion of the iris, as in the operation for artificial pupil, which will be described in the following lecture.

The monograph of Graefe on chronic iritis, and the chapters on iritis in the works of Stellwag and Arlt, in addition to those in our best English text books should be carefully studied.

SELECTED.

COMPLICATED CASE OF LABOR.

PROLAPSUS OF THE FUNIS, ETC.

Dr. Alex. R. Simpson communicated to the Edinburgh Obstetrical Society, 9th of December, 1863, the following case, which presents some features of interest in respect, 1st, of the diagnosis of pregnancy; 2d, of the duration of pregnancy; 3d, of the painlessness of parturition; 4th, of prolapse of the umbilical cord, and its remedy by the postural treatment; 5th, of the employment of the forceps; and, 6th, of the management of the third stage of labor.

"1*st*, *Diagnosis of Pregnancy.*—Mrs. A. B. was in full process of parturition when she arrived at the Infirmary, on the 29th of November; but she had left home by the advice of her medical attendant, who saw her the night before, and told her she was laboring under a dropsical ovarian tumor. And yet nothing in obstetrics is more easy, when on our guard, than to distinguish between a gravid uterus at the full term, and a dropsical tumor of the ovary. There may be a common sensation of fluctuation, a common smoothness of surface, even a common situation in the abdominal cavity, but it needs only the application of the stethoscope to detect the distinct placental and cardiac sounds, or the touch of the finger, per vaginam, to recognize the hypertrophied uterus, with the moving body in the interior. In the present instance the mistake was made by a very able and accomplished practitioner, simply from his omitting duly to examine the case. He found the woman seated on a chair when he was summoned to see her, and, having already made up his mind that she could not be pregnant, he contented himself with putting his hand over the abdomen, and feeling the tumor through her dress. He then told her that she should go off to Edinburgh and have something done for it. And when she asked him for a line to secure her admission into the Infirmary, he added, that they were all interested in this kind of tumor at present, and that no recommendation was needed, for her case would commend

itself. Now, the prejudice in his mind may have arisen from the circumstance, that when the patient, who is forty-four years of age, and the mother of seven children, had miscarried at the fifth month, two years ago, he had been led to form the opinion, which he then expressed to her, that she could never again become pregnant. But he was further led astray by the circumstance that more than ten months had elapsed since the date of her last menstruation; and it seems not to have occurred to him that the case might be, as it was, a case of

"2*d*, *Protracted Gestation*.—The patient menstruated in the beginning of January; but the period lasted only two days, instead of four as usual, having ceased on the 3d or 4th of the month. It was not till she felt "stirrage" in May, however, that she imagined herself to be pregnant, and began to think of making preparations for her confinement. She expected herself to have been delivered about the close of September or beginning of October, but it was not, as I have stated, till the end of November that the event took place. Supposing her not to have become impregnated till the period succeeding that at which the catamenia so abruptly ceased, she could not have carried the child less than 300 days; and if, as in the highest degree probable, both from the shortened menstruation and the date of quickening, she became impregnated at the period in January, we have a term of utero-gestation extending in this case to 329 days. The condition of of the child at birth, and especially of its head, indicated a corresponding degree of development. It measured 21 inches in length, and weighed over 10½ lbs. The head measured 14¼ inches in circumference; the anterior fontanelle was small, and the membrane firm; and the posterior fontanelle was so far obliterated, that the corner of the occipital could not be depressed below the parietal bones.

"3*d*, *Painless Parturition*.—Our patient having had all idea of pregnancy banished from her mind, set out from home, and reached the Infirmary without experiencing any uneasiness; and it was only while she was sitting in the nurse's room explaining the cause of her arrival, that a sudden gush of water from the vagina restored her to the conviction that she was, after all, to give birth to a child. The uterine contractions were going on, although she was unconscious of any pain; and they must have been going on for some time, for when the clinical clerk, Dr. Watson, saw her, almost immediately after the rupture of the membranes, he found the os uteri already

fully dilated, and the head exposed. The woman had given birth to all her former children easily enough; but with all of them, she had, like other women, been conscious of the pain usually attendant on the uterine contractions. On this occasion, however, the first stage of labor was completed not only without any suffering having been experienced on her part, but also without her even being conscious that labor was in any degree in progress. And throughout the whole progress of the labor, the uterine contractions seemed not to be accompanied with the slightest pain; for before the head entered into the pelvic brim, the patient was unconscious of any suffering, when the hand over the abdomen could feel the uterus distinctly contracting; and afterwards, when the head was passing through the pelvic canal, there was no kind of pain, only a feeling of fullness resulting from the pressure of the head on the soft parts of the pelvis. I had never before met with a case of absolutely painless parturition; but Dr. Von Ritgen, the venerable professor of midwifery, at Giessen, told me some years ago, that in the course of his practice he had seen seventeen women, who passed through the parturient process without any pain; and from his observation of these cases he had been led to form the conclusion that the act of parturition is normally and physiologically a painless one, which only becomes painful and pathological in consequence of the abnormal and artificial mode of life led by the great mass of womankind.

"4*th*, *Prolapsus Funis, and its Replacement by the Postural Treatment.*—I first saw the woman on going to visit, for my uncle, the patients in his ward in the Infirmary, at one o'clock, P. M., about a quarter of an hour after she had been seen by Dr. Watson. On making an examination, I found that a complication had occurred, from the falling down of a loop of the umbilical cord, of four or five inches in length, opposite the left sacro iliac synchondrosis. The umbilical vessels were pulsating vigorously, and the prolapsus must have taken place very shortly before, as there was none to be felt when Dr. Watson made the examination.

"We can easily understand the occurrence of prolapsus of the funis in cases of preternatural presentations and mal presentations of the head, or where, from contraction of the pelvic brim, the presenting part of the child is prevented from adapting itself closely to the lower segment of the uterus; but the conditions of its descent in cases of normal head-presentation have not yet been accurately ascertained.

"In the present instance, we have a concurrence of three of the conditions that have been more especially insisted on as favoring the occurrence of this accident. *First*, the patient was a multipara, with a very relaxed and dilatable cervix uteri and, perhaps, there was a want of tenacity in this part of the organ, associated in her with the absence of sensation during uterine action. *Secondly*, the placenta was placed very low down on the uterine wall, for the opening in the membranes was bounded in part by the placental margin; while, *thirdly*, the umbilical cord was inserted into the placenta within an inch of that part of its border;—two conditions, the importance of which have come to be abundantly acknowledged since the younger Naegele specially called attention to them, in an essay on the subject.* I might add, that the cord was of more than average length, and measured 21 inches, for this too has been noted in connection with prolapsus of the cord; but what exact share is to be attributed to each of these elements in the production of the complication, it would be difficult to decide, for it is a kind of case in which the mind of the accoucheur is for the time less taken up with the cause than with the cure; he is more anxious to avert the consequences of the accident, than to determine how it was produced.

"And here, let me observe, that the great variety of expedients that have been adopted for the remedy of this complication, and the vast variety of instruments that have been contrived for the reposition of the descended cord, are a sufficient indication of the imperfection and unsatisfactoriness of each and all of them. And when we look to the recorded results of these various forms of treatment, and find that, even in the best hands, little more than two thirds of the children are saved, while the average mortality in the general mass involves more than half, we are prepared to welcome a suggestion so simple and safe, and to adopt a measure so satisfactory as that described in 1858, by Dr. T. G. Thomas, of New York, under the designation of 'The Postural Treatment.' * * Although six years have already elapsed since Dr. Thomas read his essay before the Academy of Medicine, the proposal is not widely enough known, or, at least, the results of the practice have not yet been recorded in sufficient abundance to allow us to make a statistical comparison of it with the multiform methods of treatment which it promises to replace. But I am well assured that when it shall come to be adopted as

* H. Fr. Naegele, Commentatio de causâ quâ tam prolap us funiculi umbilicalis in partu, non rarâ illâ quidem, sed minus notâ, Heidelb. 1839.

the common method of treating cases of prolapse of the cord, when interference is required, the high mortality of this complication will be found to be very materially diminished.

"In the special case before us the result was in every respect most gratifying. Having placed the patient on her elbows and knees, I passed the fingers of the right hand into the vagina, and carrying down the displaced loop of cord into the os uteri, I could feel it slip away past the presenting head into the dependent uterine cavity. Friction was then applied to the uterus to increase the contractions; and these having been still further stimulated by the administration of a full dose of ergot, and the head having fairly entered into the pelvic brim, the patient was made to resume the ordinary obstetric position in about a quarter of an hour from the commencement of the operation.

"*5th, Application of the Forceps.*—The uterus continued to contract regularly and steadily, though painlessly, but the advance of the head was so very slow, in consequence of its large size and extreme ossification, that after the lapse of an hour and a half, or two hours, I deemed it right to act on the principle, which has ever received the hearty sanction and support of this society, that we ought to interfere to avert the evils of delay, rather than to wait till nature has done her utmost, and left the patient prostrate, and, perhaps, after all, undelivered. The woman was accordingly brought under the influence of chloroform, when Dr. Watson applied the forceps and speedily effected her delivery. With the birth of the child in this manner, all peculiarity in the history o the case terminates. But I may still be permitted to add a few sentences as to the way in which we conducted,

"*6th, The Management of the Third Stage of Labor.*—With the left hand over the abdomen, I followed down the contracting uterus, as the body of the child was being expelled from its cavity; and then grasping the uterus, at first gently, then with more force, I compressed it until, within five or six minutes, the placenta, with the membranes, was driven into the vaginal orifice, and removed. At first sight it will be averred that there is nothing new in this kind of procedure; and it is not as a novelty in practice that I mention it now. Yet I apprehend that though a few practitioners in the midst of us are in the habit of following out this plan in most of their cases, the ordinary practice of the profession in Britain materially differs from it, and consists, as we find laid down in all our text-books, of waiting ten or fifteen minutes till the

return of uterine contractions may have detached and expelled the placenta, then examining to discover the position of the afterbirth, and removing it; and when it does not come away at once, making gentle traction on the cord, while the uterus is stimulated to more energetic action by occasional friction, but not with such a forcible degree of compression as would suffice to separate and squeeze out the contents. Or if, in the practice of some obstetricians, the external manipulation of the uterus is insisted on as *the chief* element for successful completion of the third stage, yet even with them the internal interference with the cord and placenta is not entirely laid aside."—*Edinburgh Med. Journ.*, April, 1864.

EDITORIAL AND MISCELLANEOUS

Rush Medical College.—The twenty-second course of instruction in this Institution was commenced on the 5th of October. A very pleasant audience of ladies and gentlemen filled, to its utmost capacity, the lower lecture-room of the College building, on the evening of that day, to listen to the Introductory Address, by Prof. Miller. The numerous Alumni of the school, and its many staunch friends, will be glad to know that the current session promises to be more successful than any that has preceded it. The present attendance numbers between two and three hundred, and in intelligence and attainments, the class of students will compare favorably with any that we ever looked upon. The faculty are perfectly united and harmonious in their views as to the best plan for instructing medical students, and strengthened and encouraged by the approval their former course has received from the profession of the Northwest, they feel determined to put forth renewed efforts to sustain the reputation the school has acquired, and to give to the young men who annually avail themselves of its means of instruction, ample opportunities to gain a full knowledge of those fundamental principles that are essential in the education of a competent physician.

Suspension of Medical Journals.—The Rebellion and the financial derangements in the country, consequent thereupon, have operated most disastrously upon the Medical periodicals of the land. Not a few, indeed, a majority of the Medical journals published in 1860, have been compelled to suspend. One of the latest that has discontinued, is the *Medical Times* of New York city. This we regret, for the vacuum thus made in our exchange list, we fear, will remain unfilled. And we can but think that the profession of the Atlantic States, in allowing this journal to suspend, in consequence of inadequate pecuniary support, have done themselves a real injury. The difficulties of Medical journalism at all times, are not inconsiderable, and at times they accumulate so as to produce a stasis in the *circulation*. When the *Times* discontinues, and the *Surgical Reporter* must defer its issue for weeks, and the Boston *Journal* acknowledges embarrassments in its way, we can but feel thankful that, through the promptness of our subscribers, the *Medical Journal* of Chicago feels none of these annoyances, that have visited the Medical periodicals of the older Eastern cities. With two exceptions, we believe, the *Chicago Medical Journal* is the oldest Medical periodical in the United States, it having been published twenty-one years; and never was its list of paying subscribers so large as now.

The New Surgeon-General of the United States Army.—Dr. Joseph K. Barnes, who has been acting Surgeon-General for some months, has been appointed Surgeon General of the United States Army, vice Dr. Wm. A. Hammond.

Officers of the American Dental Association.—Prssident, Dr. J. H. McQuillen of Philadelphia; Vice Presidents, Drs. C. P. Fitch of New York, H. Benedict of Detroit; Corresponding Secretary, Dr. George W. Ellis of Philadelphia; Recording Secretary, Dr. J. Taft of Cincinnati; Treasurer, J. J. Weatherby of Boston.

Surgeons in Captivity.—The following is from the Richmond *Despatch* of recent date:

"The following officers, captured at Tupelo, Miss., some time since, were brought to this city yesterday, and committed to Libby Prison, Surgeon J. L. F. Garrison, 50th Ind., Asst. Surg. H. C. Cooper, 178th New York, Asst. Surg. John Little, 24th Missouri, and acting Asst. Surg. R. P. Kendle, U. S. A."

A New Ambulance.—Asst. Surg. Howard, U. S. A., has prepared a model of a new ambulance, combining many and important advantages and conveniences not possessed by any form of ambulance hitherto in use, yet having the merit of extreme simplicity, and not liable to get out of repair.

A Brevet Worthily Bestowed.—It is with pleasure that we announce that Surg. Richard S. Satterlee, Medical Purveyor, U. S. A., for the past ten years located in the city of New York, who ranked as Major, has, after receiving the brevet of Lieut. Colonel and Colonel, finally received that of Brigadier General, dating from September 2d. These honors, which are very worthily bestowed, have, as officially stated, been conferred "for diligent care and attention in procuring proper army supplies, as Medical Purveyor, and for economy and fidelity in the disbursement of large sums of money."

General Satterlee entered the army in 1822, and has been in the service ever since. Since the Rebellion broke out in 1861, his duties have been arduous and responsible.

The General comes from good stock, his father being among the first to volunteer in the Revolution; he was subsequently Captain in the first Regiment, Regular Infantry, of the United States (Hazan's Legion); was in many of the trying ordeals of those days, and died of a wound received at the battle of Brandywine.

Honors of this character are so sparingly conferred on our

profession, that this evidence of appreciation will be received with gratitude by the Medical Corps of the Army, than whom there is no more faithful and able corps in the service of the Government.

There are others of the older army surgeons who, by their long, arduous and faithful labors, have well-earned increased rank, and we trust it will be bestowed.

At a late meeting of the Cincinnati Academy of Medicine, Dr. Blackman presented an extraordinary specimen of osteo-sarcoma, or enchondromatous tumor of the femur, measuring four feet in circumference, and weighing sixty-four pounds.

Jonathan Knight, M. D., late Professor of Surgery in the Medical Department of Yale College, died at New Haven, Conn., August 25th, in the seventy-fifth year of his age.

PROCEEDINGS OF THE GALEN MEDICAL SOCIETY, OF STARK CO., IND.

This Society was organized July 9th, 1864, and has held two meetings since its organization. At the last meeting, which was held Oct. 1st, 1864, the Secretary was instructed to furnish a synopsis of the proceedings of that and the previous meetings to the *Chicago Medical Journal* for publication.

The Society was organized at Knox, Ind., July 9th, 1864. Dr. L. D. Glazebrook, of Saint Pierre, was chosen President, and Dr. J. B. Hoag, of Knox, Secretary.

The principal features of that meeting were:

1st. Passing a preamble and resolutions setting forth that, in consequence of the advance in prices on flour, meat, groceries and dry goods, as well as a corresponding increase in the price of medicines, it was necessary for physicians to

imitate "the rest of mankind" and give another turn to the crank of prices; and forming a fee-bill, in conformity with said resolutions, which was signed by all the members, who pledged themselves to be governed by it.

2nd. Passing a rule that each physician should furnish each other physician with a list of those who were indebted to them, and refused to liquidate their claim, but were able to do so; and pledging themselves not to administer to such persons or their families until their former physician's bills had been paid.

3rd. Passing a resolution expressive of their willingness to practice for indigent widows and orphans, and all other proper objects of charity, whether they were compensated or not.

4th. The framing of a Constitution by which the Society was to be governed was deferred until the next meeting.

5th. The Society adjourned, to meet at Knox, August 6th, 1864.

The second meeting of the Society was held at Knox, Aug. 6th, 1864, pursuant to adjournment.

The main features of this meeting were:

1st. Adopting a Constitution by which the Society is to be governed.

2nd. Requiring each member to report one or more cases at each meeting, giving diagnosis and treatment.

3rd. Making it the duty of the President to appoint, at each meeting, one, to prepare an essay on some subject of interest, to be read at the next meeting.

4th. Dr. J. B. Hoag was appointed to produce an essay to be read at the next meeting. Subject—The duties and responsibilities of the physician.

5th. The Society adjourned, to meet at San Pierre, Oct. 1st, 1864, at 2 o'clock P. M.

The Society met at San Pierre, Oct. 1st., pursuant to adjournment.

The principal features of the meeting were:

1st. It was voted that before names were reported as delin-

qnents a settlement should be demanded of them, and they informed that they had to settle within a reasonable time to be designated.

2d. It was voted that the members of the Society refuse to counsel with an irregular physician, except in company with another regular physician.

3rd. Several cases, with diagnosis and treatment, were reported.

4th. Dr. J. B Hoag read an essay on the "Duties and responsibilities of the physician," which he was requested to forward to the *Chicago Medical Journal* for publication, with a synopsis of the proceedings of this and the former meetings of this Society.

5th. Dr. S. B. Coltett was appointed to prepare an essay to be read before our next meeting, the subject to be selected by himself.

6th. Adjourned, to meet at Knox, Nov. 5th, 1864, at 2 o'clock.

L. D. GLAZEBROOK,
President.

J. B. HOAG, Secretary.

NEURALGIA OVER THE SPINES OF CERTAIN VERTEBRÆ.

M. Trousseau observes in *L'Union Medicale*, during a clinic on neuralgia, that when it occupies the branches of the trifacial, it is always at the point of emergence of the ophthalmic branches, of the superior maxillary and of the inferior maxillary that the pain is most acutely felt. Then comes the frontal point where pain rarely fails, then the parietal point where it is frequently wanting, last of all the occipital nerve although not related to the lingual in origin, is almost always affected. He has observed an inexplicable and invariable thing in all cases recorded, that whether the trifacial alone was attacked or the occipital simultaneously affected, pressure

on the spinus apophyses of the first two cervical vertebræ was *always* very painful and in a certain number of cases immediately awakened pain in the affected nerves. If the nerves of the brachial plexus were attacked, pressure over the spinous apophyses of the last cervical vertebræ produced pain and it was the same when he explored the vertebral column in the case of intercostal, lumbar and sciatic neuralgia. M. Trousseau lays it down as a rule, that in the various neuralgias the spinous apophyses are painful at a point nearly corresponding to that at which the nerve emerges, and not unfrequently the pain extends a little higher up the vertebral column.

NEW ANÆSTHETICS.—The *Intellectual Observer* mentions that Dr. Genges has addressed a note to the French Academy detailing some very interesting experiments performed by him in this direction. He has ascertained that a purified kerosoline, obtained from commercial petroleum oil, when vaporized by means of heat, will be found a valuable anæsthetic. He especially recommends as safer than chloroform, brom hydric ether, which not only is less inflammable than ordinary ethers, but possesses an exquisite odor.

New Use of Electricity.—The *Medical and Surgical Reporter*, of Philadelphia, describes a new application of electricity to household use, which promises to be of great public utility. The *electric bracket*, by Robert Cornelius, of that city, is designed as an attachment to the ordinary gas burner, "by which the gas may be lighted at any moment by the instantaneous production of a spark of electricity." It consists of an instrument by which simple friction of two surfaces is furnished by a movement as simple and easy as the turning of a key. The apparatus is attached to the bracket, and connected with the gas burner by a fine copper wire covered with silk, and terminating in a platinum point one-sixteenth of an inch from the aperture of the burner. Merely lifting a rubber plug from its bed in a cup lined with lamb's wool and silk, which constitutes the apparatus, produces a spark which darts from the platinum point to the burner and ignites the escaping gas.

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By WILLIAM A. HAMMOND, M. D.,

Surgeon-General U.S.A.

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CHICAGO
MEDICAL JOURNAL.

VOL. XXI.] DECEMBER, 1864. [No. 12.

ORIGINAL COMMUNICATIONS.

REPORT ON ORTHOPEDIC SURGERY,

MADE AT THE ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY, CONVENED IN CHICAGO, MAY 3D, 1864.

By DAVID PRINCE, M. D., Jacksonville, Ill.

(*Concluded from last month.*)

Mons. Bouvier is quoted by Barwell as having divided in 1842, in a dog, the flexor carpi radialis, the flexor carpi ulnaris, the flexor digitorum sublimis, and the flexor digitorum profundus. In none of them did the subcutaneous wound unite so as to restore the use of the parts. In another experiment, the tendons did not unite at all; in another, the severed structures even massed together. Mons. Bouley met with the last result in an experiment upon a horse.

It is probable that in some of these cases of massing together there would be afterward an absorption of portions of organized exudations, which impede the movements of tendons, like that which occurs after a general union of tissues in the neighborhood of fractures, so that the result finally would not be quite as bad as might be inferred from these statements.

An objection strongly urged even to the division of the tendo Achilles is, that the "cicatrix contraction" which attends all solutions of continuity united by the interposition of extensive organized exudation, gradually diminishes the distance between the cut extremities of the divided tendon, so that they are finally brought nearly or quite together. This makes a bad compensation for the advantage gained at first, by the necessity of the wearing of apparatus to prevent the recurrence of the deformity, while this process of cicatrix contraction is going on. In the treatment without tenotomy, the muscle is from the first made to grow longer, by a change of its nutrition, induced by the force gradually and persistently applied, rendering the progress at first more slow, while in the treatment by tenotomy, this growing of the muscle to a greater length has afterward to be secured, when the cure fallaciously seems to have been completed, and perhaps after the case has passed from under the supervision of the surgeon.

The following is Barwell's language upon this subject: "The re-union of the tendo Achilles, after its division for Talipes equinus, is almost a certainty, but it (the division) permanently weakens the muscles, nor is such a procedure, as a rule, an efficient cure of the disease; partly because the gastrocnemius and soleus are not the principal muscles affected, and generally have very little to do with the mal-position, partly because contraction is sure to recur." (p. 120.)

Notwithstanding all this, however, there are occasional instances in which even Mr. Barwell, anti-tenotomist as he is, would divide the tendo Achilles.

"I do not mean to deny that, occasionally, when there is either great want of development or great degeneration, it may be necessary to divide the tendo Achilles, but it should always be avoided if possible, since it is merely a temporary expedient which always leaves behind it a certain deformity." (p. 127.)

In contrast with this again is the language of Bauer. (p. 24.) "As a general thing you have only to deal with the contracted

muscles, and *division* is the sovereign remedy. But if the case has existed from infancy the bones have in form accommodated themselves to their abnormal position, the tibio tarsal articulationis crippled; then the prognosis is rendered doubtful, and the case may be irremediable."

"It is a common observation of orthopedic surgeons that the relief of contracted muscles by tenotomy reacts most favorably for the nutrition of the affected extremity, and nutritive supply promotes, self-evidently, its growth and development. Passive motion co-operates in the same direction."

A question of interest here arises as to what part the division of the tendo Achilles takes in the restoration of the muscular function.

If the congestion of the muscle, occasioned by the increased supply of blood to the tendon beyond for the repair of its wound, favors a better nutrition and consequent restoration of nervous power, it might be supposed that a seton or an issue applied nearer to the muscle to be affected, from the proximity of inflammation, would do better by exciting more action in the muscles.

It is more probable that the movements of flexion and extension, which attend the treatment following the division of the tendons, and subsequent to the re-union of the divided tendons, gradually induces a lengthening of the muscular fibrils, and this lengthening is a necessary condition to their shortening under the irritation of electricity or any other irritant. This opposing force should be either elastic or alternating, in order to obtain the most stimulating effect upon the muscles in process of restoration; permitting frequent exercise of contraction, with yielding force so graduated as to restore the length of the muscle upon the decline or cessation of their contraction.

The alternating movements of the tendons of the still paralyzed antagonist muscles, first pushing and then pulling these tendons, and, in a minor degree, pushing and pulling the muscles themselves, invites a flow of blood to the muscular sub-

stance, favoring its continued healthy nutrition, and the earliest possible revival of nervous power, when the paralyzing cause residing in the brain, in the spinal cord, or in the course of the nerves, whether from organic lesion or sympathetic action, is removed.

If the cause of the paralysis is such a destruction of nervous substance as to result in complete and permanent paralysis, the alternating movements of the muscles will at least tend to preserve their volume, by keeping up their nutrition, by making it mechanically possible for the blood to circulate through all their capillaries; motion being as essential to the freest circulation through the muscles as through the lungs.

The general health then has the benefit of a well-distributed circulation, in addition to the local advantages of attention to this indication.

This plan of yielding force, called by Dr. Henry G. Davis "elastic extension," is very properly denominated by him, the "American plan," and to him is due the merit of having been the first to employ it systematically, and with a full appreciation of its value, acting in a manner similar to that of muscles, alternating in the extent of their movements with the alternations of the degrees of resistance to be overcome.

Apparently from ignorance of American Medical literature Barwell claims this plan as his own. This is one of the instances in which several claimants for originality may be equally honest and original, the merit, however, consisting in the application of some other invention which makes a revolution of the given art, not only easy but unavoidable.

In this case the invention at the bottom is the manufacture of elastic rubber, placing in every one's hands a most facile means of meeting an indication which the older surgeons saw but had no ready means of accomplishing. (See Trans. Am. Med. Assoc., 1863.)

In cases affording obstinate resistance to reduction by extension, the progress can be greatly facilitated by the occasional application of force, while the patient is insensible from the influence of ether.

The same condition is artificially produced which occurs in a subluxation or sprain. The most tense ligamentous fibres are torn, without a complete rupture. The investments of the muscular fibres in the shortened muscle are either slightly torn interstitially, or put upon extreme tension. All this is followed by increased vascularity, which is favorable to change of tissue, in obedience to the tension afterward applied to it for the purpose of elongation.

This has been a common practice among American Surgeons for many years, though Barwell, strangely enough, claims it as his peculiar invention. He says, with much apparent satisfaction, (p. 116,) "This is also a procedure of *my own* adaptation to these diseases, and is one from which very great advantage may be drawn." He very properly goes on to say, "I would limit its employment to severe cases, and would caution surgeons against the use of violence; since, when once the muscular power is annihilated by the anæsthetic, very little force is required to place the foot in a normal position."

ELECTRICITY.

Electricity has been employed to remove the condition of the muscles upon which the deformity has been supposed to depend.

This subject can not better be illustrated than by quoting from representative writers, who take opposite positions.

Bauer already so often quoted, more for the recent date of his publication than for its scientific value, says, "The most efficacious remedy in behalf of innervation is electricity. It should be used with assiduity every day and for months in continuation. It will stimulate the existing mobility and prevent structural decay. * * Electricity is the substitute for volition and the best local gymnastic agent. Next are friction with alcoholic liquids; with phosphorated oil, (phosphorus, 3 grs., dissolved in an ounce of warm almond oil,) with the flesh brush, with or without cold irrigation."

We are left to infer that he would apply the electric current to the contracted muscles with the intention of relieving the

spasm upon which the contraction is supposed to depend. This question of spasm has been already sufficiently discussed and it may be proper to add that, as a curative agent, the galvanic current should not be applied to the muscles whose tendons it has been found necessary to divide, but to the elongated muscles whose partial or total paralysis has permitted the shortening of their antagonist muscles.

It is obvious that when, by unresisted tonic contraction, the muscular fibres and their fasciæ have shortened to their utmost, neither electricity nor the prick of a pin can make them shorten any more. A galvanic current can make no impression which is known by movements, because this agent and other irritants only produce contractions. If, however, the muscular fibrils and their investments are first made to grow longer by frequently repeated pulls upon them, or by constant force varying in intensity, thus restoring the muscle to a greater or less extent, to the possibility of performing its natural function, that of producing *motion*, instead of the one to which it had degenerated, that of holding parts in *position*, i. e., the function of ligaments, then, after so much progress has been made towards the cure, it might be expected that electricity would index it by the contractions which would result from its application.

It is difficult to see, however, on what rational principle, electricity should be applied to the shortened muscles with any other intention than to determine whether they could shorten any more, or to ascertain in the progress of treatment in a case in which a muscle had been shortened and degenerated beyond the possibility of exciting contractions by the electric current, whether any progress had been made, or perhaps to throw light upon the probable replacement of the muscular substance by fatty degeneration. In the latter case electricity could not produce movement.

The notion of Bauer that we have only to deal with the "contracted muscles," is certainly in forgetfulness of all correct pathology. He details in his book, cases of paralysis of

the inferior extremity, followed by permanent extension of the foot, beginning with painless contraction of the extensor muscles. Now what would electricity do with these muscles? It might make them contract more disproportionately, or if in too strong currents it might exhaust their excitability. What would tenotomy do to them? It would permit a greater degree of shortening of the muscle affected than could otherwise take place. We have something else to deal with than the contracted muscles.

In these cases of paralysis of all the muscles of the leg, there was an attempt at restoration of muscular power, commencing in the triceps extensor pedis. The restored contraction of these muscles having no resistance to oppose followed the usual law of shortening and of acquiring a more limited space of contraction; or from utter want of pull upon them, a fixedness in the shortest space, to be followed by fatty degeneration, or by absorption of the proper substance of the muscles, and a condition of inelasticity in the muscular investments. In all such cases the early use of power to counteract the muscular contraction is an imperative indication; partly to obviate the permanent contraction of the muscles, which are in the process of restoration of their proper function, and partly to give time for restoration of contractility in the paralyzed antagonising muscles, which are slower in the process of restoration. If in the restoration of muscular contraction referred to in these cases of paraplegia, both sets of muscles had been supplied alike by nervous power, no deformity would have resulted. There remained a relative paralysis of the flexors of the foot, the tibialis anticus, peroneus tertius, and long extensors of the toes. If this is so, the electric current should be applied to the latter muscles, rather than to the calf of the legs.

The following quotation from R. B. Todd's "Clinical Lectures on Paralysis and Diseases of the Nervous System," Lindsay & Blakiston's Edit., p. 152, will here be in point:

"You will often be consulted as to some expedient for pro-

noting the restoration of paralyzed limbs to their normal condition. To this question, after having given a fair trial to the various means which have been proposed for this purpose, I must reply that I know of nothing which more decidedly benefits paralyzed limbs than a regular system of exercise; active when the patient is capable of it, passive if otherwise.

"As to the use of electricity, which is now much in vogue, or strychnia, which has been recommended, I feel satisfied, as the result of a large experience, that the former requires to be used with much caution, and that the latter is apt to do mischief and never does good. I have seen cases in which, after the employment of electricity for some time, that agent has apparently brought on pain in the head, and has excited something like an inflammatory process in the brain. And so strychnia will also induce an analogous condition of the brain, *and will increase the rigidity* of the paralyzed muscles. Some good may occasionally be effected by the use of friction or cold water, or shampooing, all of which tend to improve the general nutrition of the nerves and muscles."

COMMUNICATED.

MESSRS. EDITORS:

The task of the medical reformer is always, like that of Sisyphus of old, an endless one. Hardly has he elaborated his idea, and brought it into public notice, when ignorance and prejudice combine to roll it back upon him. Even when the summit of success is reached in the general recognition of its usefulness, his strife is not to end amid the rivalry of conflicting and opposing views of individuals.

Not to affect the *role* of the professional philanthropist, may I offer to your readers some objections to the continued proclamation of the virtues of this or that method in the treatment of *prolapsus uteri*, whose success, if it be attained, is unnatural and abhorrent to our merest instincts, not to say

enlightened reason; concluding with some brief statements which may incline an inquiring mind to a more careful examination of other means applicable to the vast majority of cases, and interfering in no way with the functional or organic perfectness of the patient.

To the American mind the idea of curing prolapse of the uterus by inducing the cohesion of vaginal walls is singularly repugnant. One readily conceives of the possibility of closing the vaginal outlet, thus to prevent the actual exit of a *procident* womb, but in practice the most distressing cases are those in which but slight prolapse is present; where, if it be true as our veterans in obstetric science assert, that the vaginal walls by themselves considered are in no wise the uterine support, this severe and unnatural operation would be superfluous. Indeed, since vaginal contractions are the most dreaded obstacles to the reposition and maintenance of a displaced organ, *artificially* induced by the actual cautery, they must not only fail in purpose, but absolutely preclude all further effort to relieve the injured and suffering patient. The attempt to excise a portion of the relaxed duplicatures of peritoneum, which constitute the true uterine and vaginal ligaments, thus to shorten them and support the womb, would seem more philosophical and scarely more barbarous.

The vagina is more properly to be esteemed an antagonizing force to the uterine ligaments, if the term force may be applied to so passive an organ. Its relaxation therefore can not, alone, predispose to uterine prolapse, though its contraction would most assuredly do so, and I apprehend that proper investigation would assign a very prominent place to this cause in displacements occurring after severe and tedious labors. I repeat, therefore, my conviction that Dr. Bird's operation, acting upon parts not concerned in the support of the uterus, and even tending to increase the obstacles in the way of its reposition, is not based upon physiological grounds, and must prove valueless, unless perhaps in certain cases of *procidentia*, where the mere retention of the organ within the pelvic cavity may be the prime object in view.

Permit me to advert to other methods, not new indeed as a class, but open to as serious objection as that above alluded to. The uterine neck, when in its normal condition, is not endowed with great sensitiveness, nor are the parts contiguous thus sensitive. But from whatever cause, let congestion and inflammation arise, or let nervous irritations occur, upon the contact of parts not designed to exist, and speedily another condition is present—one of hyperæsthesia—which is to be regarded most religiously in the treatment proposed or undertaken. Imagine, then, a uterus prolapsed for months, perhaps for years, congested or inflamed, every motion of the body carrying with it a local ache or a twinge in parts remote by reason of the extreme sympathies awakened with the diseased and distressed organ, and conceive again of enclosing such a cervix in an unyielding socket of wood or rubber or other possible material, or, indeed, of allowing it to rest in any way upon such an instrument, supported from without, for the implied and expressed purpose of maintaining the uterus in an elevated position, thus to secure *relief from suffering!* It need hardly be written, that such a support will, in the vast majority of cases, fail signally in accomplishing its object, where it does not indeed aggravate the symptoms, because of its unfortunate substitution of a still more unyielding and more irritating resting place for that to which the displaced organ has been already reduced. No wonder is it that the pessaries of years ago were confessedly pitiable failures, or that the profession are loth to acknowledge that any good can come of an instrument bearing the name. Beside the demerit suggested, great objection applies to a method which needs for its fulfillment external appliances which, in the constant motion of the wearer, must always remind her of her ailment, inducing by their sensible presence a condition of mind and body neither comfortable nor healthful. One at all conversant with the delicate sensitiveness of the female mind will look far and wide for means which will meet as well the mental as the physical acquirements of her case.

The same objection applies to all "abdominal pads" and "supporters," which are moreover entirely unphilosophical, tending, I believe, *always* to aggravate the cause of suffering, under the dangerous guise of temporary relief. Dr. Meigs is undoubtedly right in considering the "abdominal cavity" a *plenum*, making it subservient to the laws of hydrostatics, in that pressure externally applied is communicated in exact ratio to its walls inferiorly, superiorly and laterally. It matters not if that pressure be "directed upward" to relieve the womb of the weight of the bowels, it only tends to force the abdominal contents into the pelvic cavity, depressing rather than conducing to the elevation of the uterus.

Enough has been said to afford the premises for a brief exposition of a plan of treatment for this affection, differing in theory and practice from those advanced by your contributors, and advocated by men whose obstetric writings have deservedly secured for them a world-wide reputation.

I have endeavored, indirectly, to suggest the advantages to be sought for, as well as the disadvantages to be avoided, in the selection of an uterine support. First, it must be contrived in accordance with a just appreciation of the relationship of the parts concerned. It must be *philosophical*. Second, it must not involve such an unnatural interference with those relations, as, if unsuccessful, to prevent other means being used, having the same object in view. Third, it must elevate without pressing upon irritated or inflamed parts. It should be painless. Fourth, it must enhance the mental comfort and well-being of the patient, by being an ever present assistant, without being a constant reminder, and require the least possible interference from physician or patient. Fifth, it should not interfere with the integrity and complete performance of every function, marital or otherwise. Lastly, it should aim at completeness and permanency of cure in the least possible time.

I know of no uterine support which so fully meets these

indications as the pessary of Dr. Hodge, of Philadelphia. It is eminently philosophical, addressing itself entirely to the relief of the parts, whose office it is to afford a perfect and elastic support to the uterus, and finishing its work when, by long rest and judicious general treatment, they have been enabled to regain a natural tension and capacity. It involves no change in the vaginal tissues, or such topical derangements of parts as would prevent its own disuse, and the subsequent trial of other means. I speak with the confidence of experience, in claiming for it also the power of elevating and suspending the displaced organ in such a manner as that its cervix, never intended to be its support, and diseased because it has been abused in that capacity, is freed from contact with unyielding tissues, and from the weight of superincumbent organs. And this it does, when properly applied, with the alone temporary inconvenience of introduction. It requires no assistance from without, by straps or abdominal pads, and is worn *unconsciously* by the patient for weeks and months, with only care enough on her part to secure cleanliness of person. It interferes in no wise with the use of the syringe, the freedom of exit of menstrual fluids, or with the exercise of marital rights. It aims at, and secures in the majority of instances, a condition of mind and body freed from deleterious influences, and now able react most healthfully in all its parts, particularly in those whose duty it is to support the uterus, so that, at a variable period, the patient may be encouraged to hope for a more natural and complete freedom of power and function.

It has obviously been my purpose in this communication to avoid any incursion upon the wide field of controversy which separates the disciples of Dr. Bennett and Dr. Hodge, as the representative men of our day, so far as concerns uterine affections. I have simply presumed that there were some, who, searching after truth and effective means, had failed either to meet with Dr. Hodge's instrument, or to give it the thorough and tentative examination which secures a full appreciation of

its merit. Its claims are so fully and ably set forth in the inventor's work on the Diseases of Women, that I shall have amply repaid myself if I induce any physician to study, still more, to test in practice, its admirable precepts.

As an apology, I may add, that in no other department of practice have I found nearly so favorable results, in so large a proportion of cases, to attend the use of any single *curative* means, and I hope, at some future time, to give the profession, at length, the details of cases which have furnished my own mind with the most positive and conclusive proofs of the truthfulness of the statements made at present.

H. Webster Jones, M. D.

Note.—Since the above was written I have learned that several applications have been recently made, to an eminent medical man of this city, for *cauterizing* irons, with which to "*cure* (!) prolapsus uteri." *Verb sap. sat.*

THE DUTIES AND RESPONSIBILITIES OF THE PHYSICIAN.

AN ESSAY READ BEFORE THE STARK CO. MED. SOC., OCT. 1, 1864.

By J. B. HOAG, M. D.

Mr. President and Gentlemen:—

The task which has been assigned me is one that well might employ an abler pen, and which one, far more competent, might well enter upon with hesitancy and reluctance. The first item which I shall notice in connection with the first department of my subject is, *The duty of being amply qualified for the vocation of his choice.*

Before entering fully upon the discussion of the thought under consideration, I will premise that the young man who contemplates becoming a disciple of Esculapius, contemplates

assuming a position, at once honorable, which has claimed for its votaries the noblest intellects, the most gigantic minds, of which the world can boast; but while this is true, it is a vocation fraught with grave responsibilities, not unfrequently vexatious perplexities, and onerous and fatigueing duties. Those who imagine it to secure a life of ease or indolence, will ascertain upon experiment, that they have counted without their host. There is, to me, something grand and sublime in being instrumental in mitigating the sufferings of those who are enduring the tortures of disease; in restoring to the society of those who are dear to them, by the ties of consanguinity or affection, those whom, to all human appearance, death has claimed as his victims; in restoring the roseate hue of health to the wan and cadaverous cheek of the invalid.

Having, after due consideration, and a full appreciation of the dignity and responsibility of the calling, as well as difficulties incident to it, decided upon making it a profession, the next idea is, the qualifications necessary to enable one to discharge the duties that will necessarily devolve upon him.

Life and health are the most desirable of earthly blessings, and when disease deprives us of the one, and threatens to wrest from us the other, we have the greatest interest possible at stake to induce us to seek aid from those who are justly competent to afford relief and guarantee to us those estimable boons, and the man, young or old, who presents himself before the public as one who is capable of administering to the necessities of the sick, without a consciousness of a competent qualification, is assuming a fearful responsibility.

The question, how can the requisite qualifications be obtained? is one that properly presents itself for consideration. We answer, by perusing the works of those who have preceded us, and who have left their experience upon record, for the benefit of their successors. The student of medicine should be diligent in seeking to acquire knowledge of this kind. He who purposes to assume the responsible position of administering to the diseased, and warding off, for the time being,

the shafts of death from its intended victim, has no time for idleness but he should avail himself of every opportunity to acquire information, which is calculated to enable him to be of benefit to those to whom he may, in the future, be called upon to administer. Here it would be proper to remark, that there is a great difference between reading and studying. The text-books which it is necessary for the student of medicine to peruse, can not, with benefit, be read in a careless manner, as might be done with a novel or history, with the thoughts wandering to other subjects, but it must be *carefully*, *diligently studied*, and the ideas therein contained *permanently* stored in the mind and frequently made the subject of thought and reflection, in order that he may be able to reduce them to purposes of practical utility, whenever circumstances render it requisite for him so to do.

If there is, in times of peace, one curse that civilized society suffers more from than any other, it is quackery—empiricism. The vast number of valuable lives that have been sacrificed at the shrine of ignorant presumption, the number that have been materially injured for life, by ignorant pretenders to the art of medicine, can never be correctly estimated while time rolls its onward course to the vast ocean of eternity. The moral turpitude that is attached to this reprehensible course, is extreme. Compared with the empiric, the swindler, nay, highway robber, who takes but pelf, without injury to life or health, are harmless. These considerations ought to stimulate the student to every possible exertion to become, as far as possible, competent for his vocation. But he cannot learn all that is necessary to be known from books alone. He should have recourse to the lecture room, where, under the instruction of those who have previously climbed the weary steps of scientific knowledge, he may gain information, by ocular demonstration, that he can obtain from no other source. There are advantages to be derived from this method of instruction, which no other advantages possess. Ordinarily, deeper and more lasting impressions are received from oral

instruction than is the case by perusing that which is written; and the lecture room affords opportunities for ocular demonstration in chemical experiments, natural and pathological anatomy, and clinical medicine which cannot be obtained from books alone. It is conceded by all that knowledge conveyed to the mind through the medium of the senses is from the nature of the mind more permanent than that obtained through any other medium.

The time has been when legislative enactments threw the shield of their protection round the public, and made it obligatory upon all would sustain the relation of physician to the public to emenate from colleges founded for their benefit, with vouchers of their ability; but this barrier against imposition has been broken down to too great an extent for the public good, but yet the moral obligations to be competently qualified, as well as the rights of our patrons, remains the same.

But the study and the lecture room do not afford all the facilities for obtaining information of value to the medical student. It has been well said, by an eminent medical writer, that "the theory of medicine can be learned from books and in the lecture room, but the practical knowledge necessary for success must be obtained by the bed-side of the sick, in the chamber of the invalid." It behooves the student, then, to avail himself of every opportunity that is offered to visit the sick, observe the symptoms of disease, and the action of remedies used.

After having become qualified to stand the scrutiny of a thorough examination, and by application over the "midnight oil," and years of studious application to medical books and all other available means calculated to afford the requsite information, to enter upon his vocation, the physician presents himself before the public as a candidate for public patronage, he ought not to regard himself as having arrived at the finality of his attainments, but rather as having merely laid the foundation on which it is his business for a life time to build. All through the course of his life he should be a student—a

hard, devoted student—determined to dig deep into the hidden mysteries of the healing art, and avail himself of all the new discoveries which mark, with rapid strides, the progressive character of the age in which we live; that he may use them for the benefit of those to whose necessities he is called to administer.

But other duties devolve upon him. While it is his imperative duty to guard against needless exposure, which is calculated to jeopardize his health, no considerations of selfish indolence should ever prompt him to refuse to brave storms or tempests, or to endure fatigue, in the performance of professional duties. The physician ought ever to be willing to sacrifice his ease and comfort, if the necessities of the sick and suffering require him to do so. While we frankly admit it to be the duty of the physician to attend, when his services are required, upon the indigent and those who are proper objects of charity, irrespective of the certainty of an adequate compensation, we claim that he is not, in duty, bound to dispense his favors to those who *might*, but *will not*, make an effort in that direction.

The physician should regard himself as the guardian of the public health. It is his duty under all circumstances, and especially during the prevalence of epidemics, to give to his patrons such information as may serve for prophylactic purposes in the avoidance of disease.

The items which we have enumerated have reference particularly to the duties which the physician owes to his patrons, but there are others which refer particularly to the profession. In regard to these it may truthfully be said, that the golden rule which the Saviour enunciated for the guidance of His followers, is sufficient for a guide if strictly adhered to, in the conduct of one physician towards another. Courtesy, affability, a recognition of the rights of our professional brethren, should under all circumstances mark the course of every physician.

Much more might be said relative to the duties which de-

volve upon the physician, but suffice it to say, in conclusion, on this part of our subject, that they are varied and controlled to a great degree by circumstances, which require the exercise of a sound, deliberate judgment.

We now preceed to remark briefly in reference to the responsibilities which he incurs, and which are the legitimate results of his vocation.

A fearful responsibility rests upon the physician if bad results follow the treatment which the sick receives at his hands, provided, in consequence of ignorance or indolence, that treatment was not adapted to the case. I frankly confess that I can not imagine how those who profess to be skilled in the healing art, but know full well that they do not possess the requisite knowledge, can rest easy under the load their consciences must bear, with the consciousness of the amount of responsibility they are assuming. Quackery has doubtless been instrumental, to a great extent, in peopling the regions of perdition with many who, had not their lives been cut short by a false pretender, might have complied with the requisitions of the Gospel and have become heirs of salvation.

The physician assumes grave responsibilities in all the duties of his calling, but the extent of it is determined, in a great measure, by circumstances. He ought always to reel that while he maintains that relation to the public, a great amount of responsibility rests upon him, of which he can not divest himself. To him the anxious mother, the solicitous wife, the grieved father, the afflicted husband, and the weeping child, look with anxious solicitude, when their loved ones are prostrated with disease, and the grim monster threatens to snatch them from their loved embrace.

Other ideas might properly be noticed but our article has reached a greater length than we at first anticipated, and we will leave the subject for a future time, or more able hands.

CLINICAL LECTURES ON DISEASES OF THE EYE.

By E. L. HOLMES, M. D., of Chicago,

Lecturer on Diseases of the Eye and Ear in Rush Medical College, and Surgeon of the Chicago Charitable Eye and Ear Infirmary.

ARTIFICIAL PUPIL.

Gentlemen:—Whenever, under certain circumstances, the natural opening in the iris becomes obstructed, thereby shutting the rays of light from the retina, a new or artificial pupil may be made in the iris and the usefulness of the eye restored.

The operation by which this is usually done is termed Iridectomy, and is often followed by the most satisfactory results. This subject opens a long chapter in Ophthalmic surgery, of which I can only give you the leading principles. The operation is especially applicable to three classes of cases. 1st. Those in which light is prevented from entering the eye, by opacities of the cornea, central opacities of the lens, and closure of the pupil by organized lymph. 2d. Those in which experience has shown, without, however, giving perfectly satisfactory reasons, that this operation arrests the progress of a destructive inflammation of the iris, choroid, and ciliary processes, relieving pain and, in some instances, restoring sight. 3d. Certain cases of cataract in which, in the operation by extraction, the passage of the lens through the iris (pupil) may be facilitated by enlarging the natural pupil, thereby reducing the danger of injury to the iris.

The operation is performed in certain other conditions of the eye; but a careful study of the three classes just mentioned will enable you to appreciate the indications for the operation in other cases.

Before performing the operation for artificial pupil in the

first and third classes of cases, it is a matter of importance to examine the condition of the retina. You can readily understand, that, whenever in these cases, the retina or optic nerve is amaurotic, there would probably be little advantage derived from the operation.

Whenever there is an opacity of the cornea front of the pupil, and the patient can distinguish objects held in the plain of the iris, there is almost a certainty that the retina is intact. If there are adhesions between the iris and cornea or lens, with opacities of either of these organs, there is reason to believe the retina is healthy, if the iris retains its normal color, if the patient can distinguish the light of a candle in the dark, at the distance of thirty feet, or if he can perceive the shadow of the hand passed to and fro before the eye.

In cases of extensive adhesions between the iris and lens, especially where the iris is discolored, or the eye atrophied, there is reason to fear that both the choroid and retina are impaired. Still even in very unpromising cases of this kind, the removal of a piece of the iris has sometimes restored quite good vision to the eye.

As I have already informed you, chronic iritis, with adhesions to the lens, is very liable to suffer relapses, terminating finally in choroiditis. The removal of a part of the iris often arrests this tendency.

In Glaucoma, and certain forms of choroiditis, Iridectomy is one of two operations, which are most certain of affording relief. For explanations of the curative effects of this operation in chronic iritis and glaucoma, I would refer you to several articles by Graefe, a translation of which may be found in the publications of the Sydenham Society. In the last few numbers of Braithwaite's Retrospect is quite a full discussion of the subject.

It is sometimes a question of considerable importance to decide whether an operation on one eye will prove advantageous when the other is perfect. This question, however, can scarcely arise when it is the object of the operation to arrest inflammation.

In other cases as, for instance, in opacities of the cornea, good authorities differ in opinion as to the advantage to be derived from an operation on one eye, the other being sound. Inasmuch as the new pupil is not situated in the natural axis of vision, there is sometimes difficulty on the part of patients in directing the eyes upon an object without double vision, when one eye is sound and the other has an artificial pupil. Although patients after a time learn to overcome this disadvantage, I prefer not to operate where one eye is normal, unless the new pupil can be placed quite near the centre of the iris, and a large part of the cornea is perfectly transparent. Where both eyes are quite diseased but more or less suitable for the operation, I believe it is usually preferable to operate upon the better one alone.

A question sometimes arises in reference to the most suitable position for the new pupil. In many cases of opacity of the cornea there is but one choice, since but one portion of the cornea, and that often a minute portion, may be left transparent. Of course the section of the iris behind this transparent portion of the cornea can alone be removed with advantage. Whenever, as in central opacities of the cornea or lens, an artificial pupil can be formed in any section of the iris, there are reasons why the opening should be made in its inner, or inner and lower quarter. Some prefer to excise the upper, and others the lower part of the iris. Except when absolutely necessary, the new pupil should not be placed towards the external angle of the eye. In all cases it should be placed as near the centre of the cornea (iris) as possible.

Reference to the three cases of artificial pupil which I have been able to bring before you during the winter, will serve to impress upon your memory some of the foregoing principles. In the case of the young man, who lost his sight by the premature discharge of a blast, so much of the cornea was cicatrized that the artificial pupil could only be made in the upper and inner sixth of the right iris.

The German, who lost the use of his eyes from muco-p uru-

ulent conjunctivitis, is able to see quite well through a pupil in the upper part of the iris, made behind a very narrow rim of transparent cornea.

The Irishman, with the very dense albugo, covering more than three-fourths of the right cornea, has obtained good vision by means of a pupil in the outer quarter of the iris. I believe you will seldom find a patient with an artificial pupil, *in the outer quarter of the iris*, who sees better than the one last mentioned.

It is well to remember that, where a small transparent portion of the cornea is surrounded by a translucent rim, vision is liable to be quite indistinct, after an operation for artificial pupil, on account of the diffraction of light. In these cases a minute aperture in a thin plate of dark metal, held close before the cornea, will generally improve vision by preventing diffusion of light.

The operation itself is usually simple, and attended with very little difficulty. With the use of chloroform and the ordinary instruments to keep the lids open, the eye can be fixed in any desired position, with a pair of forceps holding a small fold of conjunctiva. By means of a lance-shaped knife an incision, one to two lines long, is made into the anterior chamber, by passing the point of the knife, held with its flat surface parallel with the plane of the iris, through the sclerotic, a little less than a line behind its union with the cornea. After withdrawing the knife *slowly* to prevent a rapid discharge of the aqueous humor, and consequent sudden reduction of the intraocular pressure upon the delicate vessels of the retina, and to avoid sudden movement of the lens and iris forward, the fine iris forceps is introduced into the anterior chamber, without pressure upon the iris and lens; the forceps should be opened so as to allow a fold of the iris, near its papillary edge, to enter between the blades; they should then be closed and withdrawn with a piece of the iris, without tearing it from its ciliary attachments; this piece should be clipped off with a pair of scissors close to the cornea.

The anterior chamber is often filled with blood after this operation, but it is usually all absorbed in less than forty-eight hours. The only dressing necessary is a bandage with compresses to keep up gentle pressure upon the eye for a day or two. Iridectomy is rarely followed by inflammation either of the iris or other tissues.

It is an important fact for you to bear in mind that tearing or cutting out a piece of iris is scarcely ever followed by inflammation, but punctures and bruises of the iris, and contact of pieces of cataract and foreign substances with the iris, are almost sure to lead to serious inflammation.

In cases of central opacities of the cornea and lens, the operation of Iridodesis has been recommended in place of Iridectomy. This operation consists in seizing a small fold of the iris and drawing it through the wound in the cornea without tearing the fibres of the iris. Instead of snipping off the piece of iris, a fine thread is tied around it and left to slough off, when the iris becomes fixed in the cicatrix. In this way the normal pupil is preserved, but drawn from the opacity of the iris or lens and left where the cornea or lens is transparent. It is stated on good authority that while this operation is more difficult, it is also much more liable to cause inflammation than Iridectomy.

A few important points regarding Iridectomy in Glaucoma will be mentioned at another time.

SELECTED.

CONSTITUTIONAL SYPHILIS.

A Clinical Lecture, by JONATHAN HUTCHINSON, *F. R. C. S., Surgeon to the London Hospital.*

"I sometimes feel almost annoyed at being compelled so very frequently to prescribe iodide of potassium. We go from bed to bed, and to cases apparently of the most different kind,

and for almost one in every three I am obliged to dictate the same prescription.* Iodide of potassium in large doses, generally in combination with ammonia, and sometimes with the bichloride of mercury, seems to be the panacea for almost a majority of our cases of chronic disease. Here is a man with convergent squint and double vision; he has come up from Cornwall to be treated, and he looks perfectly healthy. We investigate his case, and pronounce the diagnosis of syphilitic paralysis of his right sixth nerve. A man, a few beds lower down, came in on account of a pain in his heel, which had resisted all treatment for months, and prevented him from either working in the day or sleeping at night. He, too, looked quite healthy; but, on probing his symptoms and history, I gave a syphilitic diagnosis, and, what is more, confirmed it by quickly curing him. A woman was admitted six weeks ago with numerous large ulcers on the legs, and some also on her arms. She had scars of former ulcers about her knees; and the multiplicity of the sores and the worm-eaten character of the edges confirmed the suspicion formed at first glance. She, like the former patient, had had much previous treatment without result, and got well most rapidly under our favorite prescription. There is a boy in Talbot Ward with ascites, and with a liver which reaches below his navel, and with hard periosteal nodes on almost every long bone in his body. His sister was also here not long ago, suffering from nodes; and his mother I have repeatedly had under care during the last fifteen years for various forms of constitutional syphilis. We have also in the same ward two men suffering from chronic enlargement of the testis, which we attribute to the same almost ubiquitous taint. One of them is already nearly well; and the other, I have no doubt, will soon be so.

"If we go down stairs to the woman's ward, we shall find some most interesting cases. There is Mrs. G., the unfortunate wife of a very dissolute sea-captain. She came into the hospital in order to have her sight improved by an artificial pupil, in consequence of adhesions, etc. One of her eyes is shrunk, soft and collapsed; and she has, or rather had, the pupil of the other eye almost wholly closed by lymph. I have made her an artificial pupil, and she sees as much better as we could expect. You will notice that she speaks thickly, uses her limbs awkwardly, and, although not yet middle-aged,

* In mentioning this proportion, I of course allude only to our wards for chronic disease, and do not include those for accidents.

looks as if she were entering on second childhood. Her history is that of a case of subacute syphilitic inflammation of the pia mater. She first came under my observation more than a year ago, at the Moorfields Hospital, for most acute double iritis, and covered with syphilitic rash. The pupils were already covered with lymph, and she was already salivated. We adopted the treatment which seemed best; but, as you see, only with very partial results as regards her eyesight. In her right eye, choroiditis and inflammation of the vitreous body afterward set in; and the eye ultimately became soft, and then shrunken, as it now is. After this, she became exceedingly nervous, could not sleep at nights, and was at length laid up at home with delirium. She was now for some weeks under private care with a form of mania; all her limbs became weak and tremulous; and, when she recovered, those of her left side were weaker than the others. As syphilitic inflammation often attacks the choroid coat of the eye, there is no reason why it should not affect the vascular membrane of the brain; and to suppose that it did so in this instance would well account for all her symptoms.

"In the same ward is a girl aged fifteen, whom we admitted a week ago with large, ragged edged, very deep ulcers on the back of one leg. They are ulcers of a character which, if seen in an adult, you would at once pronounce to be those of tertiary syphilis. And, in confirmation of that view, she has an induration in front of one tibia. The girl is, however, only fifteen; and she has had these ulcers for several years. The disease in her is congenital; and she shows, in order to help us to this opinion, one of the most typical sets of teeth that I have ever seen. You will note that her physiognomy would not have led us to suspect her, for there is nothing very peculiar in it. The bridge of her nose is not flattened; her forehead is not protuberant; nor are there any scars of fissures about her mouth. Her teeth, however, tell the tale, and are so characteristically malformed, that I should venture a positive opinion without other evidence. You will watch the effect of specific treatment upon her ulcers. I will ask you to observe that the ulcers are clearly not due to mere ordinary cachexia, for the girl looks healthy; and should they be well under iodide of potassium in a few weeks, I shall then ask you to remember that they had existed for several years before she came here.

"I have only mentioned about a third of the curious forms of constitutional syphilis at present under our care. You will

observe that I omit all primary and secondary forms of disease. Those which we shall at present consider are such only as occur at long periods after the original disease, and come into the category of late tertiary affections. Our knowledge of this latter class has of late years very much improved, and we are now able to recognize many as such which formerly we did not know; and, I am glad to add, we are able to exclude some from suspician which were formerly much suspected.

"The feeling of annoyance to which I adverted, as sometimes arising when one is obliged over and over again to prescribe the same specific, has its origin in a doubt and a fear—a doubt of one's own accuracy of judgment; and, secondly, a fear of the criticisms of others. A sort of fear arises as to whether, after all, the suggestions now and then made, 'Oh, he is riding his hobby—he sees syphilis in everything,' may not have some foundation in truth. Now, this self-mistrust is very natural and very useful in its proper place, but let me warn you not to let it go too far; and, as regards the criticism of others, let me beg of you not to allow them to influence your judgment one iota. There is not the shadow of a doubt that the syphilitic virus is capable of producing effects at extremely remote periods, and after long intervals of apparently good health. There is not the least doubt, further, that this virus is very widely diffused amongst all classes of the community. We must, therefore, expect to encounter its results very frequently, and under very varied circumstances. Our duty in this matter is to find out with accuracy, amongst the great variety of chronic maladies which come before us, which are syphilitic and which are not. Upon our success in diagnosis will depend our success in treatment. There is no room for joking skepticism. It is a simple question of fact. My patient presents a form of disease which we know must have had some cause. We know, further, that the syphilitic taint is a cause quite capable, in some instances, of producing a similar result; and we want to find out by collateral evidence whether that cause is in operation here. And, if it should so turn out that we are obliged, after pains-taking investigation, to believe in the presence and efficiency of that special cause in five out of every twenty patients, it cannot be helped. We want truth; and, if that is the truth, we must take it and act on it. A good means of checking our own conclusions is always at hand. I allude to the results of treatment. In most cases of tertiary syphilis, the consequences of acquired dis-

ease, the effects of specific treatment are most prompt and definite. Unfortunately, it is not so in a few, especially in those which concern the nervous system; and it is not so in many which are consequent on inherited taint. In these the efficacy of specific treatment is often but ill marked.

"Before proceeding to relate cases in detail, there are three or four doctrines regarding syphilis which have of late years fought their way to general belief, to which I must ask your special attention.

"The first of these is, that tertiary syphilis may, and often does, last through a person's life. By tertiary syphilis we mean all forms of specific disease occurring subsequently to the primary and exanthematic stages; practically, everything that comes later than two years after the infecting sore. The exanthematic stage usually occurs within two months of the original sore, and is rarely protracted beyond the year. We will, however, to give good margin, say two years. After this the disease appears to have no stages; periods of entire latency, of the most variable lengths, may occur. The symptoms which show themselves are irregular, and subject to repeated relapses after cure by treatment. Between the secondary and tertiary symptoms, an interval of health, often of several years, and it may be of many, supervenes.

"The second cardinal doctrine, as regards tertiary disease, is what I have just adverted to: that it may be *latent*. By latent, I mean that it may be entirely concealed. The patient may appear to be in robust health; may not show the slightest trace of a symptom; may even marry and beget healthy children; and yet the disease may reappear. In a recent lecture I brought forward a case in which the period of latency had been twenty years; and I shall have to mention several others in which it has been nearly as long. The phenomena of latency are even more wonderful in respect to inherited than they are in regard to acquired disease.

"Thirdly, I wish to insist that it is very common for married women to acquire a constitutional taint, without having ever had primary or secondary disease, and, therefore, without either themselves or their husbands having the slightest suspicion of what has happened.* This occurs in women who have borne children to syphilitic husbands, and who have

* According to my own observation, the reverse of this may also occur, and the husband be constitutionally infected without any local lesion or primary disorder.—Z.

imbibed from the fluids of the fœtus the poisonous material. We will call this 'Syphilis by conception.'

"Lastly, we must remark that it is very possible for a patient to have primary syphilis, and never be aware of it. In a woman this may easily be. A small indurated chancre causes very little irritation, and is perhaps never suspected to be of any consequence.. It so happens, that the sore most likely to infect gives the least local annoyance; and many an inexperienced man will allow a sore of this kind to go on without treatment, and afterward, in good faith, assure his surgeon that he has 'never had a chancre.' But there are cases even yet more difficult to explain, in which even a practised eye never finds the infecting sore. I have more than once or twice known it to happen, that surgeons or medical students, who came under treatment for secondary forms of disease, and who made not the slightest attempt at secresy, assured me that they had never been aware that they had primary sores.

"The chief lesson to be drawn from these various sources of fallacies in the histories we receive is, that the surgeon must learn, by widely-extended practice, to trust to his own eyes for a diagnosis. The importance of being independent of what our patients may tell us can scarcely be exaggerated in this matter. Not only will it save us from being misled by erroneous statements, but it will in some cases save the necessity for asking painful and annoying questions.

"We will now proceed with some clinical illustrations of our remarks.

"*Latent Syphilis; an Interval of Eight Years without Symptoms, the Patient enjoying Robust Health; Ulcerative Destruction of the Palate, with Psoriasis of the Backs of the Hands.*—Wendon Dawson, aged thirty, a dark-complexioned man, looking much older. Nine years ago he had a sore. He was then in the navy, went into Chatham Hospital; 'took mercury pills, and was salivated freely.' He had a bubo in one groin, which suppurated and remained open for two months. He left the hospital after six weeks, and took no more medicine. He recollects that he had a sore throat, but does not remember any rash.

"On leaving the hospital he went on board ship again; and had good health and remained quite well. Three years later he married. His wife has never conceived, and has remained in perfect health. Very soon after he married he had 'yellow jaundice,' and was very ill for a week or more; he was at

home a month. About a year ago his throat began to be sore, and six months after this sore, patches showed themselves on the backs of his hands. He has only been under treatment for these affections for about two months. During the interval since his discharge from the Chatham Hospital, with the exception of the attack of jaundice, he has enjoyed good health, and has been wholly free from symptoms; 'never lost a single day's work.' We questioned him most closely, and could not make out that he had had any suspicious symptoms whatever.

"January 13th, 1864. The subject of the above notes was sent to me by Mr. Swales, of Sheerness. He is now cachectic, and speaks in a hoarse whisper. His soft palate is extensively destroyed by ulceration, which is still spreading; his breath has the fetor of diseased bone. The backs of his hands and wrists are covered by patches of psoriasis, with fissures and peeling of epidermis, just like the common psoriasis palmaris. There is not a single patch in either palm. There are two or three similar patches on each cheek. The man states that he has never had any venereal disease since the one described nine years ago, and there is not the least reason to doubt his statement. Let us note also that, although salivated in the first instance, he has never needed any medicine since, except during the last few months. Under about two months' treatment, this patient got quite well as regards his throat; and his psoriasis, although not cured, was much benefited.

"In the next case, we have again phagedæna of the throat, but its chief interest attaches to the fact that the man has entirely lost his hearing. With regard to the throat, I may, however, here ask your attention to the difference between the secondary and tertiary forms of disease as they occur in it. In the secondary stage, the inflammation is always superficial, and always ends in cicatrization, without noticeable loss. Indeed, excepting in the tonsil itself, there is rarely any ulceration. On the velum palati and pharynx it is rather inflammatory swelling than ulceration. All the deeply ulcerative or phagedænic affections of the throat occur years after the primary disease, and are tertiary. Of this, both the cases before us are examples."—(*British Med. Jour.* and *Dublin Med. Press.*)

THE PHYSIOLOGICAL EFFECTS OF TOBACCO.

By W. B. RICHARDSON, M. A., M. D.

Dr. Richardson's views on the physiological effects of tobacco were given in the following summary: 1. The effects that result from smoking are due to different agents imbibed by the smoker, viz., carbonic acid, ammonia, nicotine, a volatile empyreumatic substance, and a bitter extract. The more common effects are traceable to the carbonic acid and ammonia; the rarer and more severe to the nicotine, the empyreumatic substance, and the extract. 2. The effects produced are very transitory, the poisons finding a ready exit from the body. 3. All the evils of smoking are functional in character, and no confirmed smoker can ever be said, so long as he indulges in the habit, to be well; it does not follow, however, that he is becoming the subject of organic and fatal disease because he smokes. 4. Smoking produces disturbances: (*a*) in the blood, causing undue fluidity and change in the red corpuscles; (*b*) on the stomach, giving rise to debility, nausea, and in extreme cases sickness; (*c*) on the heart, producing debility of that organ and irregular action; (*d*) on the organs of sense, causing in the extreme degree dilatation of the pupils of the eye, confusion of vision, bright lines, luminous or cobweb specks, and long retention of images on the retina, with other and analogous symptoms affecting the ear, viz., inability clearly to define sounds, and the annoyance of a sharp ringing sound like a whistle or bell; (*e*) on the brain, suspending the waste of that organ, and oppressing it if it be duly nourished, but soothing it if it be exhausted; (*f*) on the nervous filaments and sympathetic or organic nerves, leading to deficient power in them, and to over-secretion in those surfaces—glands—over which the nerves exert a controlling force; (*g*) on the mucous membrane of the mouth, causing enlargement and soreness of the tonsils—smoker's sore throat—redness, dryness, and occasional peeling off of the membrane, and either unnatural firmness or contraction and sponginess of the gums; (*h*) on the bronchial surface of the lungs when that is already irritable, sustaining the irritation, and increasing the cough. 5. The statements to the effect that tobacco smoke causes specific diseases, such as insanity, epilepsy, St. Vitus' dance, apoplexy, organic diseases of the heart, cancer and consumption, and chronic bronchitis, have been made without any sufficient evidence or reference

to facts; all such statements are devoid of truth, and can never accomplish the object which those who offer them have in view. 6. As the human body is maintained alive and in full vigor by its capacity, within certain well-defined limits, to absorb and apply oxygen; as the process of oxidation is most active and most required in those periods of life when the structures of the body are attaining their full development; and as tobacco smoke possesses the power of arresting such oxidation, the habit of smoking is most deleterious to the young, causing in them impairment of growth, premature manhood, and physical degradation.—*Medical Times and Gazette.*

REPORT OF

A CASE OF OPISTHOTONOS CURED BY ICE.

By EDWARD HOWARD, M. R. C. P. L.

This case seems worthy of record in a medico-legal point of view, as, under many circumstances, poisoning by strychnia would have been strongly suspected.

On the 13th of August, in the afternoon, I was summoned to attend Mr. C——, aged twenty-five, of bilious aspect and nervous temperament. He is a foreman in a draper's shop, but much out of doors as an agent collecting orders. About two years ago he was under my care with marked hysteria, which diagnosis was subsequently confirmed by other physicians who saw him. From that he recovered by a liberal diet and a general mineral-tonic treatment. He has enjoyed good health during the last eighteen months, although I do not doubt he has had much anxiety from failure in trade.

On arriving, I found my patient lying over the back of a chair, his shoulders and legs being supported by four attendants. His body was drawn backward and arched; attempts to put him straight caused a fearful increase of pain, which he described as like having a testicle pressed strongly. There was also a sense of suffocation from contraction of the abdominal and intercostal muscles; heart's sounds and action normal; pulse feeble and quick (72.) I had him placed on a couch, with a sofa pillow under his back as a support. He

was perfectly sensible, and had had no fit or loss of consciousness. A few hours before, he had a dull pain in the spine between the shoulders; this increased, and he found himself unable to speak to a customer he was serving. He went to the back of the house to get fresh air, and then was suddenly drawn back by the tonic spasm in which I found him. Tongue moist and clean, and the bowels regular. He had received no wound or injury of any kind, nor taken anything that could have disagreed with him. There was no sickness or nausea. Ordered a light nutritious diet, and five grains of sesquicarbonate of ammonia in infusion of gentian every fourth hour.

Aug. 14th.—Morning: Much the same; not worse, but no definite amelioration. Ordered ice to be constantly applied along the spine, and to continue medicine. Evening: Better; the spasm less violent, and the breathing unimpeded. To continue the ice, and take five grains of citrate of iron and quinine every sixth hour.

15th.—Still improving. The opisthotonos has vanished; only tenderness along the dorsal spine remains, and slight spasmodic pains on sudden movements of the body.

I need only add that the progress to entire recovery was rapid, and hitherto there has been no sign of a relapse.

Red Hill, Surrey, Sept. 10th, 1864.

Effects of Ergot of Wheat.—The following fact deserves to be noticed since it may become the starting point of researches and may be of useful therapeutical application. No one has, so far as I know, mentioned the fact observed by Dr. Poyet, suppression of milk under the influence of the habitual use of bread containing a notable proportion of ergot of wheat. This accident has taken place in six nurses who had eaten a considerable quantity of such bread. It should all the more fix the attention of practitioners that it has been also observed, at the same time, by Dr. Commarmond, and that it seemed destined, in consequence, to find its proper place in the symptomatology of ergotism. I may add that in the above circumstances the substitution of good wheat bread to the diseased one sufficient to avert this accident and restore the milk secretion.—*Med. and Surgical Reporter.*

RECOVERY IN

TWO CASES OF ACUTE TRAUMATIC TETANUS.

By O. FOSTER, Esq., M.R.C.S.

In looking over my case-book I am reminded of the great interest I took in two severe cases of acute traumatic tetanus under my care within the last two or three years. I do not lay claim to any originality in the treatment of them, but as it was successful I forward them for insertion in the *Lancet* If perchance by my remarks any one should be happier in the saving of life or mitigation of suffering in that formidable malady I shall be compensated fiftyfold.

It having fallen to my lot during a career of thirty years' country practice and surgeoncy to a small provincial hospital to meet with several cases of acute traumatic tetanus which were unsuccessfully treated with morphine, belladonna, aconite, tobacco, warm baths, counter irritation, &c., singly and combined, and in some of which, I fear, the remedies increased the sufferings rather than relieved the sufferer, if they did not even hasten a fatal termination, I determined, if ever another case fell under my charge, I would act more upon the expectant principle than I had hitherto done, attending only to the usual routine of keeping the bowels well open, at the same time supporting the patient to the best of my power, and leaving the prominent features of the malady almost entirely uncared for. Singularly enough, it was not very long before the two following severe cases occurred in our little hospital of thirty beds. Both of them being my patients, I had the opportunity of carrying out my intention, and was rewarded by coaching them both through a severe and dangerous illness to a state of convalescence and health.

On the 9th of May, 1861, John S——, aged twelve years, a farm laborer, received a contusion of the shoulder in consequence of being jammed against a gate-post. On the 15th he was sent to the hospital in a tetanic condition; there was no external wound or evidence of injury to the bone. Trismus was severe, and the least effort to open his mouth was

accompanied by violent spasms in the neck, which soon extended to the back and legs; indeed the whole of his muscular system became so affected that it was at times difficult to keep him on the bed. Such were his sufferings that his near relatives only desired the one speedy termination to his misery. This state of things lasted for nearly three weeks, at the expiration of which time the severity of the symptoms began to subside, and he gradually advanced towards convalescence, which was slow. He left the hospital on July 3rd quite well. The treatment consisted of half a grain of acetate of morphia every night; castor oil and spirits of turpentine, half an ounce of each every morning, which acted freely, bringing away a quantity of vitiated offensive matter. The effort to swallow produced such violent spasms that we were often unable to get down the amount of nourishment required; but the directions were to give as much strong beef-tea, milk and port-wine as he could take, and we sometimes succeeded in getting down nearly half a pint of each in the twenty-four hours, of course taken in very small quantities.

Noah C ——, aged forty-five, in good health, and a prudently living man, was admitted on the 21st of March 1862, having that day had his wrist and hand crushed while attending to some machinery. I removed the arm below the elbow, and the case progressed most favorably for ten days. On the 31st he had a rigor, which was followed by stiffness in the jaw and neck, and was attributed to cold. On April 1st, I strongly suspected what was impending, and on the 2nd we had well-marked evidence of tetanus. The case was a severe one, and for three weeks he suffered as much as I have ever witnessed on like occasions. The spasms were excessively severe. Opisthotonos existed to such an extent that he often only touched the bed with his head and heels. From the inordinate action of the masseter and temporal muscles, as well as those of deglutition, it was impossible to administer nourishment—which consisted of strong beef tea, milk and port wine—except in small quantities; of the latter he sometimes took a pint in the twenty-four hours. The general opinion was that he must die, though I was encouraged by the successful issue of the former case to hope otherwise; nor was I disappointed. On or about the 20th of April the case showed signs of amendment, which gradually though slowly progressed towards convalescence, and he left the hospital well on the 20th of May. The treatment carried out was the same as in the case of the boy S——, with the addition of the in-

halation of chloroform, which afforded relief only during the first two days; and that of a blister to the spine, which decidedly increased the severity of the spasms and his misery. The only medicine given was a grain of acetate of morphia every night, and half an ounce each of castor oil and spirit of turpentine every morning, which was steadily persevered with, and brought away, as in the former case, a quantity of vitiated secretions.

It will be evident to the reader that the tendency of the report of these cases, and my object in giving publicity to them, is to condemn the administration of powerful medicines, or resorting to active measures in the treatment of acute tetanus. We have here evidence in two instances of the subsidence of severe morbid irritation, the physical powers not having been crippled by depressing remedies.

Hitchin, Sept. 1864.

—Earthquakes on the Pacific coast are likely to take a place in Etiology. We have known a number of instances, in the present year, in which the effect of the shock on the nervous system of sensitive females has been distressing, if not serious. In one case labor was prematurely induced, and in a second the same result was threatened. There is no such thing as getting inured to them. On the contrary, the dread of them rather increases. The Mexicans and South Americans, who have had sad experience of earthquakes in their native country, suffer the most from them here. There appears to be no serious ground for apprehension, however. In a few localities, especially in the southern counties of California, there have been undulations of the earth sufficient to endanger or destroy buildings of a certain class. But we have no authentic account of earthquakes capable of doing serious mischief having occurred in the locality of San Francisco, or anywhere to the northward.—*San Francisco Medical Press.*

EDITORIAL AND MISCELLANEOUS.

LANCASTER, O., Nov. 20th, 1864.

Messrs. Editors:—Mrs. B., a healthy, laborious woman, mother of four children, menstruated the 4th of July the last time. On the 22d of Sept. following, called my attention to a tumor in the left groin, painless yet dragging. She had slight hemorrhage, and after an examination that diagnosed Ovarian tumor, (not entirely satisfactory,) was not seen until Oct. 3d; then slight hemorrhage and pain in uterus. This continued with variations until the 17th, when finding tampon, astringents and rest unavailing to prevent hemorrhage, I gave ergot, which induced strong uterine contractions and delivered a fœtus, together with four quarts of hydatids.

The child was well-formed, and from maceration appeared as if it had lost vitality two or three weeks. I have had cases of Hydatids, but never before with a fœtus. Is this unusual? I have no means of investigation, and write for information. At the period of the birth the uterus had the size and form of a seven months' conception, not the form exactly, as the weight and size was on the left, and there, no doubt, were the hydatids. Was their presence incompatible with full gestation? is the question of interest. Please answer in the *Journal.*

Yours, TOM O. EDWARDS.

[Uterine hydatids are formed only in the impregnated uterus. They originate from the perverted growth of the villi of the chorion. These villi increase by a process of germination very similar to the roots of a tree. Under normal plastic influences a due proportion is preserved between the increase of the nutrient and depurative powers of the chorion and decidua, and the requirements of the enlarging embryo. But it sometimes happens that this growth of the villi is abnormal,

and the cells they contain, increase in size and become dropsical. These constitute uterine hydatids. When recent, these hydatids appear like vesicles filled with a transparent fluid, and are either round, oblong or pyriform in shape. Some are borne upon pedicles, others grow from the walls of larger hydatids. Mettenheimer asserts that on the walls of the primary vesicles, buds appear, and develop separate hydatids, just as the buds protrude from the healthy villi, to produce by normal growth new villosities.

The hydatigenus degeneration of the chorion usually occurs early in gestation. As a consequence nutrition is diverted from the embryo, and it dies. This may explain why a fœtus is not usually present when hydatids are expelled, or as Ramsbotham and Montgomery believe, a portion of the placenta may be left in the uterus after a natural delivery, and form the starting point of a hydatid growth.

In some instances of twin conception one fœtus has disappeared under the influence of hydatigenus degeneration, while the other has continued healthy up to the full term. It is related of the celebrated Beclard that he was born under these circumstances.

If the villi of a portion, only, of the chorion become dropsical, the embryo may still be developed into a fœtus, but a time arrives when the nourishment supplied is deficient, and the fœtus dies.

The hydatids are frequently cast off before the full term of gestation, not always, however, for in some instances they are retained in the uterus long after the term. Two reasons may be given for the early contractions of the uterus and the expulsion of its contents, under these circumstances, 1st. The dead fœtus and abnormal contents of the uterus act as a foreign substance, and provoke contractions. 2d. In normal pregnancy the uterus is not distended by its contents, but increases in capacity by a process of physiological growth. In the hydatigenus degeneration of the chorion, the mass increases in size so rapidly that the uterus becomes mechani-

cally distended, and it contracts and frees itself of its pathological contents.

The development of hydatids is often so rapid that, at the fifth month, the abdomen has attained the size it should present at term. The shape of the uterus is frequently altered from the usual pyriform outline, its growth extending laterally and it becomes irregular in form.

A case occurred in the practice of the writer, during the last summer, in which near twelve pints of hydatid formation with the degenerated placenta were discharged; no trace of a fœtus could be found.—Eds.]

Editors Chicago Medical Journal:—

In the August number of the *Journal* I notice an article, by Dr. Slayter, "On the Treatment of Healthy Ulcers of the Extremities by Sealing," or by the application of narrow stripe of adhesive plaster around them, the whole covered with thin oiled silk. This mode of treatment, introduced, I believe, by Mr. Baynton, of Bristol, England, I have practiced for at least fifteen years, not only with healthy, but also with indolent ulcers, and can add my testimony to that of Dr. Slayter, in regard to its success.

Instead of oiled silk I use a dressing of simple ointment; but the silk would, no doubt, be equally efficacious, and much neater. The first severe case that I recollect treating in this way, was that of a laboring woman, about forty-five years of age, who had been afflicted for several years with an ulcer on the inner and posterior part of the leg, extending from near the knee to the ankle. It occurred after an attack of erysipelas. Various remedies had been resorted to previous to my attendance, with but partial and temporary relief. Under the adhesive strap mode of treatment, in about three months, she was cured and the ulcer healed. I have had a number of cases since, some equally, and one more severe, treated in a similar manner, and with like success. Dr. Slayter observes that this treatment is not generally resorted to in the West; and if

these few hastily written remarks will add to the influence of his article in inducing physicians here to try it, my aim will be accomplished. D. B. TRIMBLE.

BOOK NOTICES AND REVIEWS.

Military Medical and Surgical Essays: Prepared for the United States Sanitary Commission. Edited by Wm. A. Hammond, M. D., Surgeon-General U. S. Army, etc. Philadelphia: From the publishers, J. B. Lippincott & Co.—through S. C. Griggs & Co., 39 and 41 Lake Street, Chicago, Ills.

These papers were written by a number of the leading medical men of the present day, at the request of the U. S. Sanitary Commission, for the purpose of distributing them gratuitously among the medical army officers. Their merit was such as finally to make it advisable to bring them together in a permanent form and more easy of access. The result is this beautifully executed volume of above five hundred pages, divided into seventeen chapters, each treating of a different subject. Though especially designed for army surgeons, it is not the less useful or interesting to the physician in private practice. An enumeration of the authors and the subjects on which they write is a sufficient commendation of the work. These are as follows: Military Hygiene and Therapeutics, by Alfred Post, M. D., and Wm. H. VanBuren, M. D.; Control and Prevention of Infectious Diseases, by Elisha Harris, M. D.; Quinine as a Prophylactic against Malarious Diseases, by Wm. H. VanBuren, M. D.; Vaccination in Armies, by F. G. Smith, M. D., and Alfred Stille, M. D.; Rules for Preserving the Health of the Soldiers, by Wm. H. VanBuren, M. D.; Scurvy, by Wm. A. Hammond, M. D.; Miasmatic Fever, by John T. Metcalfe, M. D.; Continued Fever, by J. Baxter Upham, M. D.; Yellow Fever, by John T. Metcalfe, M. D.; Pneumonia, by Austin Flint, M. D.; Dysentery, by Alfred Stille, M. D.; Pain and Anæsthetics, by Valentine Mott, M. D.; Hemorrhage from Wounds, and the Best Means of Arresting it, by Valentine Mott, M. D.;

Treatment of Fractures in Military Surgery, by John H Packard, M. D.; Amputations, by Stephen Smith, M. D.; The Excision of Joints for Traumatic Causes, by R. M. Hodges, M. D.; Venereal Diseases, by Freeman J. Bumstead, M. D.

Outlines of Surgical Diagnosis: By Geo. H. Macleod, M D., F. R. C. S. E., EEL, Fac. Phys. and Surg. Glasgow; Lecturer on Surgery Anderson's University; Surgeon to the Glasgow Royal Infirmary, and the Lock Hospital; late Sen. Surgeon Civil Hospital, Smyrna, and General Hospital in Camp before Sebastopol. Memb. Cor. de la Soc. de Chir. de Paris; and author of "Notes on the Surgery of the War in the Crimea." First American Edition. Reprinted from Advanced Sheets. New York: Bailliere Brothers, 520 Broadway.

In reviewing medical works it has been our object and desire to peruse them carefully, and without prejudice, determined not to be influenced by any preconceived ideas of our own that would in any way tend to bias the reader, causing him to diverge from the path of generally accepted facts. We think we have studied this part of a reviewer's duty on all occasions.

The work before us is one of great value and cannot fail to be of infinite service; many of the articles, it is true, are brief, and more might have been written, but it is also true that what is written is lucid and comprehensive. The disease known as Anthrax or Carbuncle our author defines in a few words "as a circumscribed inflammation of the subcutaneous cellular tissue, leading to its death and expulsion." "It may arise as a simple affection or be an accompaniment of very serious constitutional ailments. It occurs in persons beyond middle life who are of a plethoric or feeble habit of body, or irritable constitutions, or who are intemperate in eating and drinking." It may occur in any part of the body, but is generally met with where there is cellular tissue rich in blood-vessels. It is especially on the posterior surface of the trunk that Anthrax occurs. It is rarely on the limbs."

We cannot resist quoting at length the author's language, as it illustrates the clearness of style and the easy manner he possesses of describing and contrasting diseases.

"Symptoms, a feeling of pricking, itching, or heat in the part is followed by redness, swelling, dark livid discoloration, and a throbbing, tensive, burning pain. The parts get brawny and shining. The tumor does not "point," but remains flat, though it may be as a whole elevated above the surface. There is a large circumscribed, deep-set base, having some little boils, at other times small turbid vesicles around its circumference. In time the surface gets honey-combed by small ulcerous openings, which exude a dirty, scanty, irritating, thin, fœtid pus, the amount of which may be increased by applying pressure to their neighborhood," etc., etc.

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"The local affection is preceded or accompanied by constitutional symptoms of considerable severity, which appear rarely," etc., etc.

* * * * * * *

"The affections with which it is possible to confound Anthrax are, (a) Phlegmon; (b) Phlegmonous erysipelas (at its outset); (c) Malignant Pustule; (d) Boil; (e) Bedsore. The distinction is made by observing—

1. "The history of the rise and progress of the malady. In this way it is distinguished from b, c, and e."
2. "Large size from c and d."
3. "Age and disposition of person affected (a). Boils occur in the young and vigorous.
4. "Position. May occur on any part; but it is chiefly on the back that Anthrax is seen, and not especially on exposed parts, as (c); and is not especially on the parts most liable to pressure, as in (c).
5. "Not contagious," (b, c).
6. "Several small openings, (d, only one)."

"From common boil, its size, its not pointing, its occurring in old and feeble persons, its having many openings, being of a darker red, and having a deeper base, will distinguish it. Malignant pustule begins as a small pimple after inoculation. The local affection is the leading feature in the case, and the constitutional symptoms follow; while the reverse is the case in Anthrax.

* * * * * * *

This style is observable throughout the work—no superfluity of words—making the volume more welcome to the

student. To Fractures and Dislocations the author has devoted many pages, elucidating the diagnostic characters of each form of injury, which are well worth special attention.

Gun-Shot Wounds; the entrance and exit of the ball; the size and shape of the wound, and the condition of the surrounding parts, are well described, notwithstanding but little is written on the subject.

The description of various tumors presenting themselves in different locations, especially those of the groin, cannot fail to impress the reader of the clear and succinct manner of the author's style.

In fact the entire work abounds in useful matter, and needs no further notice from us. It cannot fail to take a high rank among the standard works of our profession. We therefore recommend it to the student and practitioner.

A Comprehensive Medical Dictionary; Containing the pronunciation, etymology, and signification of the terms made use of in Medicine and the Kindred Sciences. With an Appendix, comprising a complete list of all the more important Articles of the Materia Medica, arranged according to their Medicinal properties. Also an explanation of the Latin terms and phrases occuring in Anatomy, Pharmacy, etc., together with the necessary directions for writing Latin Prescriptions, etc., etc. By J. Thomas, M. D., Author of the system of pronunciation in Lippincott's Pronouncing Gazetteer of the World. Philadelphia: J. B. Lippincott & Co. 1864.

The want of a work like the present has long been felt by the profession. Desirable as it might be that every physician should possess such a thorough knowledge of the foreign languages, that no extra aid should be required either for definition or pronunciation of any term occurring in Medical Science, yet the contrary fact is the rule. To supply this deficiency the work before us is offered to the profession. An analysis of its contents is unnecessary, as its objects are indicated in the title page. That the author has succeeded in the undertaking, none will doubt who are familiar with his former labors, contained in Lippincott's Pronouncing Gazetteer.

We heartily welcome any means which shall produce greater uniformity in pronunciation by members of the medical profession in this country. This work should effect the object. We therefore recommend it to every medical man for frequent reference.

The Army Surgeon's Manual: for the use of Medical Officers, Cadets, Chaplains, and Hospital Stewards, containing the Regulations of the Medical Department, all General Orders from the War Department, and Circulars from the Surgeon General's office, from January 1st, 1861, to July 1st, 1864. By William Grace, of Washington, D. C. Published by permission of the Surgeon General. New York: Bailliere Brothers, 520 Broadway. 1864.

This little volume of 200 pages, contains much information of interest to the *general* practitioner; and the rules, regulations and forms relating to the Medical Department of the Army, which renders it indispensible to the Army Surgeon.

Slade on Diphtheria.—This is the second and thoroughly revised edition of the Fiske Prize Essay upon Diphtheria. It contains the sum of reliable information relating to this formidable malady—its history, nature and treatment. The latter is indicated in the following brief extract: 'That it is now regarded as an asthenic disease, and consequently will bear no depletory measures, but on the contrary, requires tonics, stimulants and a nourishing diet, even in the early stages. Blisters, leeches and local bleeding of any sort should be prohibited." We do not hesitate to say that no physician should undertake the treatment of Diphtheria, who entertains opposite views. For sale by W. B. Kean & Co.

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THE CHICAGO

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DECEMBER, 1864.

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CONTENTS OF THE DECEMBER NUMBER.

PAGE.

ORIGINAL COMMUNICATIONS.

Report on Orthopedic Surgery, made at the Annual Meeting of the Illinois State Medical Society, convened in Chicago, May 3d, 1864. By David Prince, M. D., Jacksonville, Ill. 527

Communicated. 534

The Duties and Responsibilities of the Physician. An Essay read before the Stark Co. Med Soc., Oct. 1st, 1864. By J. B. Hong, M. D. 539

Clinical Lectures on Diseases of the Eye. By E. L. Holmes, M. D., of Chicago, Lecturer, on Diseases of the Eye and Ear in Rush Medical College—Artificial Pupil. 545

SELECTED.

Constitutional Syphilis. A Clinical Lecture, by Jonathan Hutchinson, F. R. C. S., Surgeon to the London Hospital. 549

The Physiological Effects of Tobacco. By W. B. Richardson, M. A., M. D. 556

Report of a Case of Opisthotonos Cured by Ice. By Edward Howard, M. R. C. P. L. 557

Effects of Ergot of Wheat. 558

Recovery in two cases of Acute Traumatic Tetanus. By O. Foster, Esq., M. R. C. S. 559

EDITORIAL AND MISCELLANEOUS. 562

BOOK NOTICES AND REVIEWS. 565

REMOVAL.

☞ The Editorial and Private Office of DRS. MILLER and INGALS will hereafter be at No. 190 SOUTH CLARK ST., between Monroe and Adams Sts.

☞ Business letters to the JOURNAL should be addressed to DRS. MILLER & INGALS, Chicago, Ills., P. O. Drawer 5787. When money is received a receipt will be returned with the next number of the JOURNAL, and subscribers failing to get such receipt will confer a favor by giving us notice of any omission

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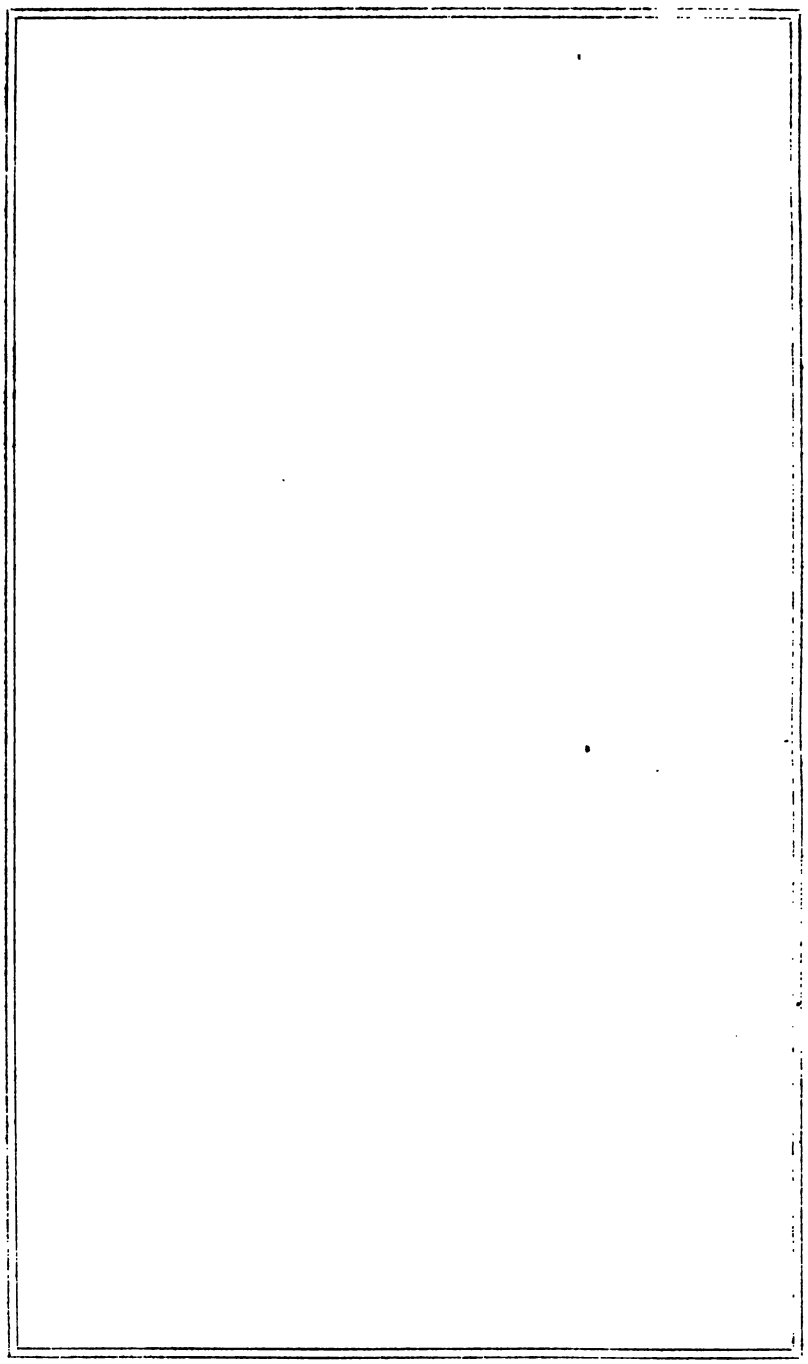

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Circular for 1864.

The Twenty-Second Annual Session of this Institution will open on Wednesday, October 5th, 1864, and continue therefrom, uninterruptedly, sixteen weeks.

The public general Introductory Address will be delivered in the lower Lecture-Room of the College—corner of Dearborn and Indiana streets—at 8 o'clock, P. M., and the regular course of Lectures will commence the next morning at 9 o'clock.

The confidence reposed in RUSH MEDICAL COLLEGE, by the Profession, is evinced by the prosperity which has attended its history. By reference to the annexed Catalogue, it will be seen that the last session numbered the largest medical class ever convened in this City, and the Trustees and Faculty pledge themselves to renewed exertions to merit a continuance of this confidence and patronage.

To the Medical Staff of the Army this School has contributed as large a proportion of its graduates as any College in the Union,

and the manner in which they have discharged their duties, has elicited the highest encomiums from the commanders of the various corps, with which they have been connected.

The means of illustration in the several departments are ample, and the course of instruction is thorough and complete.

For practical Anatomy, the supply of *materiel* is abundant, and is furnished to the student at a low rate.

The Professor of Physiology will, as heretofore, illustrate his department by vivisections, which have proved so essential to successful researches in this interesting branch. In all practicable cases, the experiments upon which the principles of physiology are based will be performed before the class, and no pains will be spared to thoroughly ground the student in the fundamental facts of this most important part of the medical course.

Professor Brainard, in addition to his usual teaching, will give special attention to those topics particularly interesting to the Military Surgeon, referring to his duties in camp, hospital, and in the field. And as, from his position on the State Examining Board, he is authorized to examine and grant certificates to those wishing to enter the army, such examinations, when desired, will be given at the close of the session.

Private classes will be formed during the session, and examinations and instruction will be given by the Professors, with an especial view to the benefit of those who design to enter the army.

Attention will be given in the department of Practical Medicine, to the demands made upon the medical attendant of the soldiery. The peculiarities of disease as modified in form and treatment by military life and habits, the great principles of hygiene and prophylaxis involved, with all those particulars, the knowledge of which, at the present time, is most indispensable to the army surgeon acting as physician. Whilst yielding all due respect to the text-books in vogue, the instructor in this department will more especially endeavor to base his teachings upon the unassailable foundation of Physiology and Pathology, as developed by the best authorities of the present day.

The Clinical advantages of the College are varied and extensive. Over three thousand patients are annually treated at the

College Dispensary, which affords to the class a large amount of interesting material for Clinical Observations.

The Marine Hospital, now containing a large number of wounded soldiers from the army, will be accessible to the class.

The Dispensary of the Chicago Eye and Ear Infirmary, under charge of Dr. Holmes, will also be open to students, giving them an opportunity to observe the nature and treatment of a great variety of affections of these important organs.

Saturday of every week is devoted to Surgical operations and Clinical instruction, at which time, indigent persons, who require advice or surgical operations, are attended gratuitously, if they present themselves before the class.

The great advantages derived from these cliniques, consist in the intimate knowledge of cases and their history; the opportunity of witnessing a great variety of surgical operations; the treatment proper for each case. From these clinical lectures and operations, occupying usually from three to four hours every Saturday, the students derive a great amount of varied practical knowledge.

Students upon arriving in the city may call on the Secretary, at his office, 45 Clark street, or any member of the Faculty, who will give them any needed information as to board, books, lectures, rooms, etc. Any one desiring information by letter, will please address the Secretary, Dr. DeLaskie Miller, P. O. Drawer, 5787.

TEXT BOOKS, ETC.

Students will find a good assortment of medical books and surgical instruments in this city. It is recommended that they provide themselves with one or more text books in each of the departments. The following, among others, are recommended:

Anatomy.—Gray, Wilson.

Physiology.—Dalton, Draper, Carpenter.

Materia Medica.—Stille, Wood, U. S. Dispensatory.

Medical Jurisprudence.—Beck, Wharton & Stille, Taylor.

Chemistry.—Fowne, Stockhardt.

Obstetrics.—Hodge, Cazeau, Bedford, Churchill.

Surgery.—Erichsen, Chelius.

Practice of Medicine.—Wood, Watson. *Reference*—Bennett's Clin. Med., Flint, or Walshe, on the Heart, Walshe on the Lungs, Habershon on the Alimentary Canal, Wilson on the Skin, DaCosta or Barclay on Diagnosis, Dickson, Barlow, Maxson, Chambers, Rokitansky, Jones and Sieveking; Hammond, Military Hygiene.

Surgical Anatomy.—Maclise.

Microscopic Anatomy.—Todd and Bowman, Queckett.

Surgical Pathology.—Paget.

REQUIREMENTS OF GRADUATION.

The following are the requisitions for the degree of Doctor of Medicine, viz.:

1st. The candidate must be twenty-one years of age, and give satisfactory evidence of possessing a good moral character.

2. He must have pursued the study of medicine three years, and attended at least two courses of Lectures, one of which must have been in this institution. Four years of regular and continued practice will be considered equivalent to one course of lectures.

3d. He must have attended Clinical Instruction during, at least, one college term.

4th. He must have taken one course of Practical Anatomy.

5th. He must notify the Secretary of the Faculty of his intention to become a candidate, and deliver to him a thesis on some medical subject, written by himself, on or before the 15th of January, and at the same time deposit the graduation fee, which, together with the thesis, will be returned to him in case of withdrawal or rejection.

6th. Every candidate must undergo a full and satisfactory examination on all branches taught in the college.

7th. Graduates of other respectable schools of medicine will be entitled to an *ad eundem* degree, by passing a satisfactory examination, paying the graduation fee, and giving evidence of a good *moral and professional* character.

FEES.

Lecture Fees, for the Course,	$40 00
Matriculation Fee,	5 00
Dissecting Ticket,	5 00
Hospital Ticket,	5 00
Graduation Fee,	20 00

The Alumni of this, and the graduates of other respectable colleges, will be permitted to attend the whole or any part of the courses of lectures, by calling on the Secretary and procuring the Matriculation ticket.

BOARD AND ROOMS.

Good board, with rooms and all the usual accommodations, can be obtained in this city at as reasonable rates as in any part of the country. By associating in clubs, students have, during previous sessions, been enabled to supply themselves with good accommodations at a material reduction from ordinary rates.

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Smith M. F.,..... "
Scott J. T., ... "
Sewell B. F.,..... "
Shaffer P.,..... "
Stone R. F.,..... "
Sherman J. J.,..... *Wis.*
Still J. M.,..... *Kansas.*
Smith Harrison, ... *Mo.*
Stillman J. D.,..... *Iowa.*
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Shumway Anson, ... *Mich.*
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Schuchard G. W.,..... *Ill.*
Shurtliff Flavil,..... "
Smith R. L., ... "
Sims John,..... "
Smith James B.,..... "
Smith W. A., ... "
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SUMMARY.

Illinois,	111
Indiana,	51
Wisconsin,	26
Michigan,	18
Iowa,	15
Missouri,	10
Minnesota,	6
Tennessee,	3
Kansas,	3
Ohio,	4
New York,	2
Canada West,	2
Colorado,	1
Nevada Territory,	1
Virginia,	1
Vermont,	1
Total,	255

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Adkins Frank B., - Ind.
Akely Harrison, - - Iowa.
Allen Orlenzer, - Minn.
Avery Samuel J., - - Ill.
Babcock Lyman F., - - Ill.
Babcock Charles M., - Minn.
Bacon A. J., - - - Ill.
Barclay S. K., - - - Iowa.
Beasley G. Frank, - - Ill.
Bibb George R., - - Ill.
Bradbury William T., Ind.
Bucher Charles A., - Ill.
Byrn Spencer, - - Ind.
Cass Frank D., - - Ill.
Cassell F. Marion, - Mo.
Chamberlin Ellston, - - Ill.
Coakley James E., - Wis.
Dayton Ephraim, - - Ill.
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Dora T. B., - - - Ill.
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Fares J. B., - - Mich.
Gaylord Horace, - - Ill.
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Goldsbury J. A., - - Ind.
Goodwin Lewis H., - - Ill.
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Hill Robert L., - - Iowa.
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Kinnear A. H., - - Ill.
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Larimer Bartlett, - Ind.
Lester Gilbert B., - - Mich.
Linn Timothy T., - Ind.
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Mendenhall Samuel, - - Ill.
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Munger Martin E., Mich.
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Nelson E. L., - - Ill.
O'Brien J. N., - - Wis.
Palmer Roswell R., Mich.
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1st	Course,	-	1843–44,	-	Students	22,	-	Graduates, 1
2d	do	-	1844–45,	-	do	46,	-	do 11
3d	do	-	1845–46,	-	do	50,	-	do 10
4th	do	-	1846–47,	-	do	70,	-	do 16
5th	do	-	1847–48,	-	do	140,	-	do 33
6th	do	-	1848–49,	-	do	100,	-	do 19
7th	do	-	1849–50,	-	do	104,	-	do 42
8th	do	-	1850–51,	-	do	126,	-	do 44
9th	do	-	1851–52,	-	do	105,	-	do 30
10th	do	-	1852–53,	-	do	108,	-	do 34
11th	do	-	1853–54,	-	do	122,	-	do 37
12th	do	-	1854–55,	-	do	116,	-	do 41
13th	do	-	1855–56,	-	do	150,	-	do 42
14th	do	-	1856–57,	-	do	116,	-	do 41
15th	do	-	1857–58,	-	do	100,	-	do 36
16th	do	-	1858–59,	-	do	117,	-	do 32
17th	do	-	1859–60,	-	do	119,	-	do 36
18th	do	-	1860–61,	-	do	160,	-	do 36
19th	do	-	1861–62,	-	do	134,	-	do 35
20th	do	-	1862–63,	-	do	179,	-	do 58
21st	do	-	1863–64,	-	do	255,	-	do 82
						2439		716

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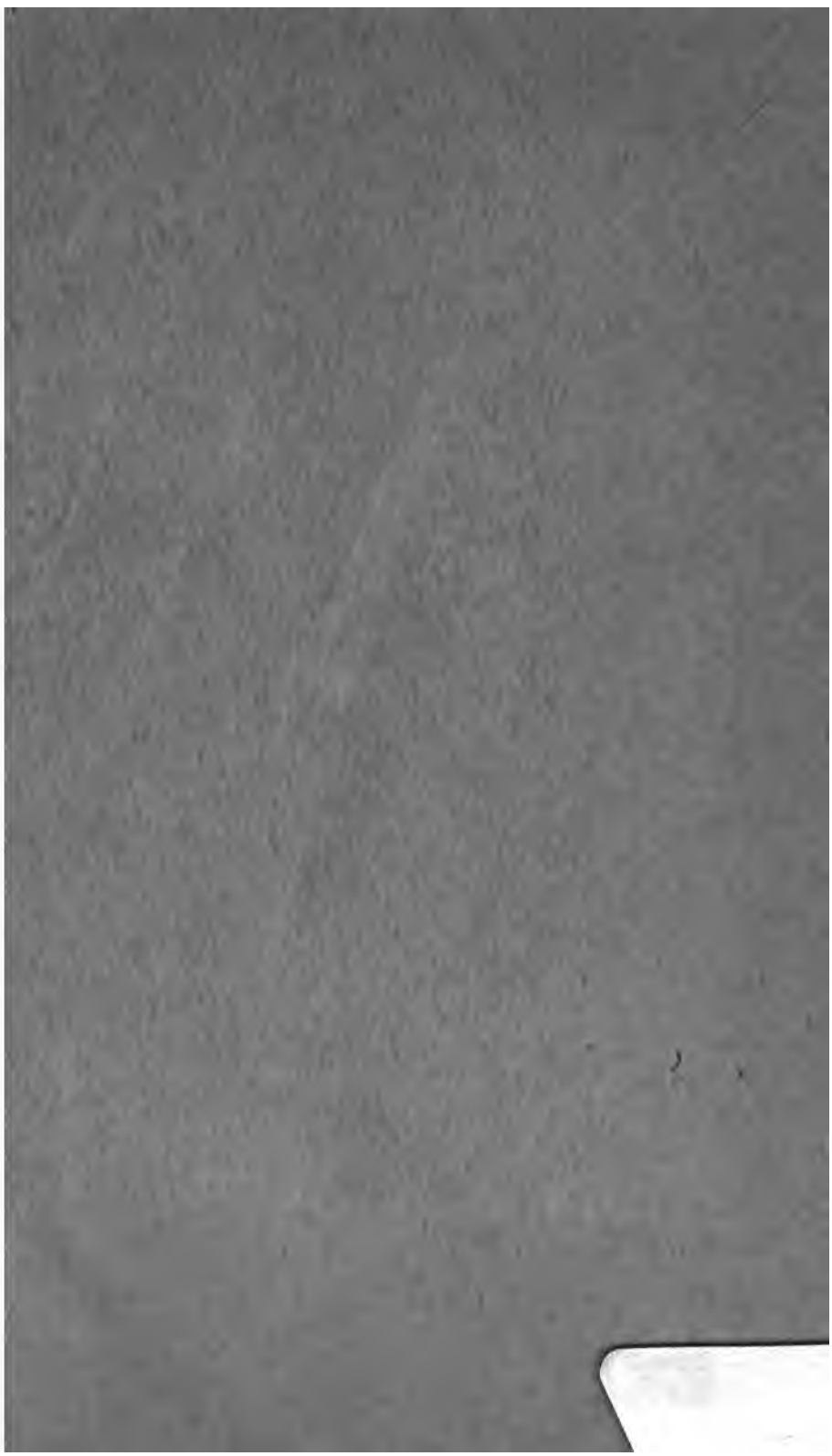

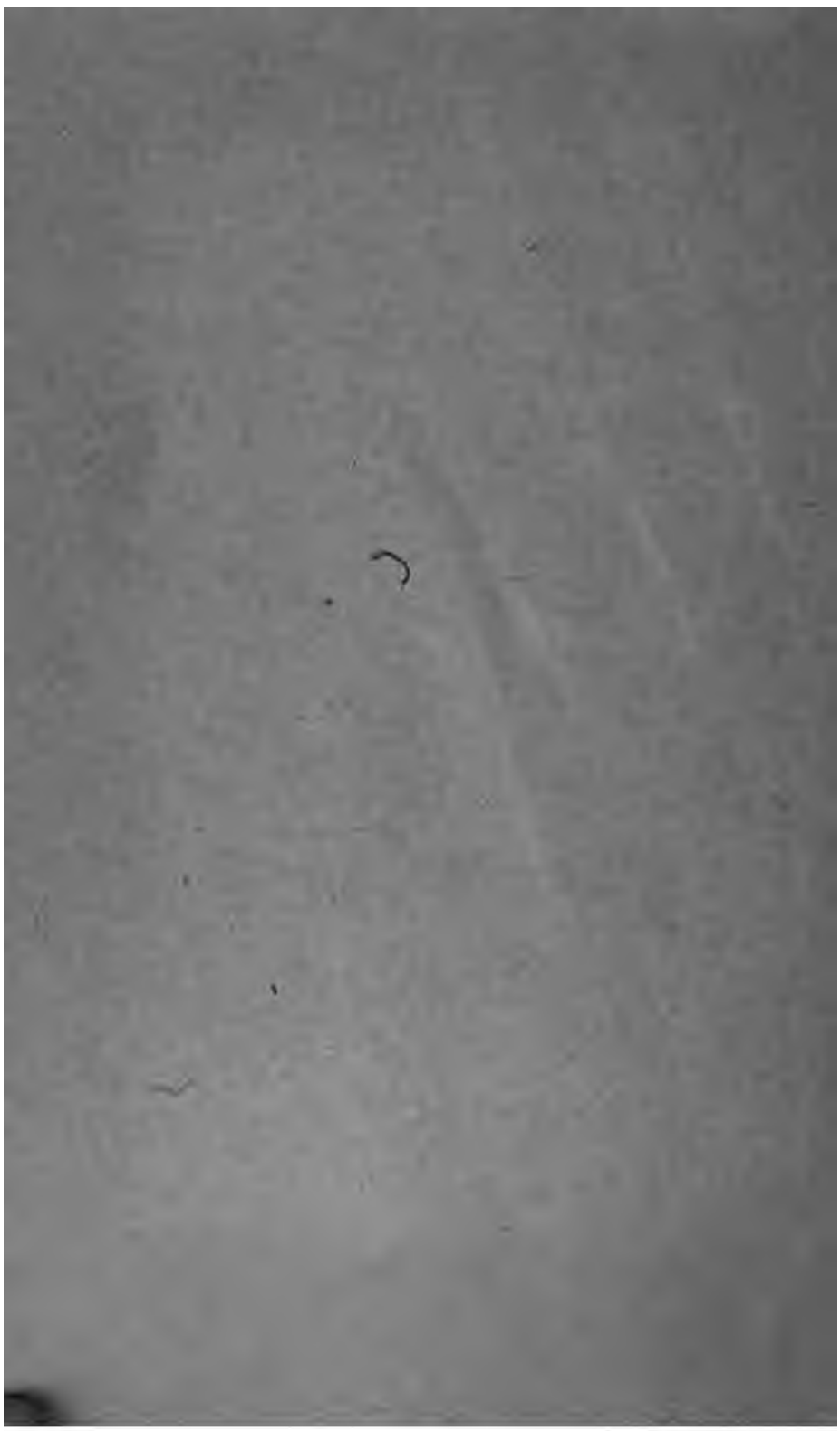

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